

CPC**COOPERATIVE PATENT CLASSIFICATION****Y10T****TECHNICAL SUBJECTS COVERED BY FORMER US CLASSIFICATION****NOTE**

This subclass has been introduced in January 2015 in view of the CPC to accommodate for technical subjects formerly covered by USPC

Former US Class 16 series

Y10T 16/00	Miscellaneous hardware [e.g., bushing, carpet fastener, caster, door closer, panel hanger, attachable or adjunct handle, hinge, window sash balance, etc.]
Y10T 16/05	. Bushing
Y10T 16/063	. . Providing a restricted or insulated environment [i.e., sealable] for internal elements
Y10T 16/075	. . Bung or tap
Y10T 16/082	. . . Threaded
Y10T 16/088	. . Providing strain relief
Y10T 16/10	. Carpet fasteners
Y10T 16/104	. . Combined fasteners and stretchers
Y10T 16/109	. . Hook
Y10T 16/113	. . Moldings
Y10T 16/118	. . Rug
Y10T 16/122	. . Stair
Y10T 16/124	. . . Risers
Y10T 16/125	. . . Rods
Y10T 16/126	. . . . Catches
Y10T 16/1263	. . . . . Sliding
Y10T 16/1267	. . . . . Swinging
Y10T 16/127	. . Sliding
Y10T 16/131	. . Strips
Y10T 16/134	. . Swinging
Y10T 16/14	. Carpet stiffener or anti-slip device, <u>per se</u>
Y10T 16/18	. Casters
Y10T 16/182	. . Adjustable
Y10T 16/184	. . Wheels
Y10T 16/1847	. . . Antifrictionally mounted
Y10T 16/1853	. . . Multiple
Y10T 16/1857	. . . . Antifrictionally swivelled

Y10T 16/186	. .	Antifrictionally swivelled
Y10T 16/1867	. . .	Ball
Y10T 16/1873	. . .	Cylinder
Y10T 16/1877	. . . .	Pivoted
Y10T 16/188	. .	Ball
Y10T 16/1887	. . .	Antifrictionally mounted
Y10T 16/1889	. . . .	Ball
Y10T 16/1891	. . . .	Cylinder
Y10T 16/1893	. . .	Pivoted
Y10T 16/19	. .	Bracket supports
Y10T 16/191	. .	Detachable
Y10T 16/193	. .	Leg elevators
Y10T 16/1937	. . .	Sliding
Y10T 16/1943	. . .	Swinging
Y10T 16/195	. .	Locked
Y10T 16/196	. . .	Shimmy dampening
Y10T 16/197	. .	Lubricators
Y10T 16/199	. .	Pintles
Y10T 16/201	. .	Pintle retainers
Y10T 16/202	. . .	Frame
Y10T 16/203	. .	Frame
Y10T 16/204	. . .	Single leg frame or fork
Y10T 16/205	. .	Rigid wheel supports
Y10T 16/207	. .	Scrapers
Y10T 16/209	. .	Sliding
Y10T 16/21	. . .	for tubular leg
Y10T 16/211	. .	Sockets
Y10T 16/212	. .	Spring supported
Y10T 16/214	. .	Inclined axle
Y10T 16/216	. .	Caster guard
Y10T 16/218	. .	Obstruction climbing aid
Y10T 16/22	. .	Thermally released check or closer
Y10T 16/27	. .	Checks and closers
Y10T 16/276	. .	Liquid
Y10T 16/2766	. . .	Concentric spring chamber
Y10T 16/2769	. . . .	Cam
Y10T 16/2771	. . .	Hinge
Y10T 16/2774	. . . .	Floor pivot
Y10T 16/2777	. . .	Multiple piston
Y10T 16/2782	. . .	Oscillating cylinder

Y10T 16/2788	. . . Oscillating piston
Y10T 16/2793	. . . Side spring chamber
Y10T 16/2796	. . . . Cam
Y10T 16/2799	. . . Spring and flexible link
Y10T 16/2804	. . . Spring and gear
Y10T 16/281	. . Pneumatic
Y10T 16/282	. . . Flexible link
Y10T 16/283	. . . Hinge
Y10T 16/285	. . . Spring and gear
Y10T 16/286	. . . Spring and lever
Y10T 16/287	. . Spring and flexible link
Y10T 16/293	. . Spring and gear
Y10T 16/299	. . Spring and lever
Y10T 16/304	. . Hinge
Y10T 16/31	. Gate hangers
Y10T 16/33	. . Sliding and swinging
Y10T 16/35	. Panel hangers, travelers and/or tracks
Y10T 16/353	. . with flexible panel attaching means
Y10T 16/354	. . . Covered, hollow or slotted track
Y10T 16/3543	. . . . with antifriction means
Y10T 16/3545	. . . . . Wood track
Y10T 16/3547	. . . . Wood track
Y10T 16/355	. . . with antifriction means
Y10T 16/356	. . Ball
Y10T 16/359	. . Cylinder
Y10T 16/361	. . Guide brackets
Y10T 16/364	. . Guide rollers
Y10T 16/367	. . Link and lever
Y10T 16/37	. . Sliding shoe
Y10T 16/372	. . . Drapery supports
Y10T 16/373	. . Track and bracket
Y10T 16/375	. . . Drapery supports
Y10T 16/376	. . Covered, hollow or slotted track
Y10T 16/377	. . . Wood
Y10T 16/378	. . . Drapery supports
Y10T 16/3785	. . . . Wood
Y10T 16/379	. . Tracks
Y10T 16/3797	. . . Drapery supports
Y10T 16/3803	. . . Laminated
Y10T 16/381	. . Wheel mounts

Y10T 16/3813	. . .	Antifrictionally mounted wheels
Y10T 16/3816	. . .	Door elevating
Y10T 16/3819	. . .	Floor
Y10T 16/3822	. . .	Reciprocating track
Y10T 16/3825	. . .	Traveling wheel
Y10T 16/3828	. . .	Swinging
Y10T 16/3831	. . .	Swiveling
Y10T 16/3834	. . .	Vertically adjustable
Y10T 16/3837	. . .	Wheel and guide roller
Y10T 16/384	. .	Wheels
Y10T 16/387	. .	Overlapping doors, common track
Y10T 16/39	. .	Ferrules, rings, and thimbles
Y10T 16/42	. .	Ring ferrules
Y10T 16/44	. .	Handle, handle component, or handle adjunct
Y10T 16/444	. .	having receptacle within
Y10T 16/447	. .	for plow
Y10T 16/451	. .	Length adjustable pull handle for luggage or luggage cart [e.g., wheeled suitcase handle, etc.]
Y10T 16/455	. .	Luggage-type [loop style] handgrip for carrying [e.g., suitcase, handbag, briefcase, shopping bag, package, etc.]
Y10T 16/4554	. . .	Extensible handle
Y10T 16/4559	. . .	Detachable handle
Y10T 16/4563	. . .	Welded or adhesively attached handle
Y10T 16/4567	. . .	Swinging handle
Y10T 16/4569	. . . .	with means permanently connecting the handle to a carried article
Y10T 16/4571	. . . .	with means permanently connecting the handle to a carried article
Y10T 16/4576	. . . .	with carrier handle including a user enhanced grip attachment
Y10T 16/458	. .	Door handle
Y10T 16/459	. . .	Detachable handle
Y10T 16/46	. . .	Knob type
Y10T 16/462	. .	Drawer pull
Y10T 16/4628	. . .	Lift
Y10T 16/4636	. . .	Knob type
Y10T 16/464	. . . .	Swinging
Y10T 16/4644	. . .	Loop type
Y10T 16/4652	. . .	Ring type
Y10T 16/466	. .	Handle having mounted grip means [e.g., bicycle handlebar grips, etc.]
Y10T 16/469	. .	Detachable handle
Y10T 16/4696	. . .	for battery
Y10T 16/4701	. . .	for casket

- Y10T 16/4707 . . . for container
- Y10T 16/4713 . . . Auxiliary handle
- Y10T 16/4719 . . . Extension
- Y10T 16/4724 . . . Cord or rope related
- Y10T 16/473 . . Extensible handle
- Y10T 16/476 . . Handle with ergonomic structure [e.g., finger engagement structure such as indents, grooves, etc.] and handle user-interaction [human engineering] enhancements such as improved handle dimensions and handle positioning
- Y10T 16/48 . Insulated handle
- Y10T 16/484 . . Handwheel
- Y10T 16/487 . . Knob type
- Y10T 16/491 . . Wire type
- Y10T 16/495 . . Unshaped or unattached pad
- Y10T 16/498 . . Bar-type handle
- Y10T 16/499 . . . for lawnmower
- Y10T 16/50 . . . Swinging
- Y10T 16/501 Casket handle
- Y10T 16/502 . . Braced handle
- Y10T 16/506 . . Knob-type handle
- Y10T 16/508 . . . with flexible suspending means
- Y10T 16/509 . . Lift
- Y10T 16/513 . . Loop-type handle
- Y10T 16/515 . . . Swinging
- Y10T 16/516 . . Ring-type handle
- Y10T 16/52 . Hinge
- Y10T 16/521 . . including frangible or fusible portion
- Y10T 16/522 . . with diverse art portion or attachment
- Y10T 16/524 . . Ball and socket
- Y10T 16/525 . . Pliant or elastic hinge
- Y10T 16/5253 . . . Metallic
- Y10T 16/5257 . . . Snap or X hinge
- Y10T 16/526 . . Eyeglass hinge
- Y10T 16/527 . . Retractable pintle
- Y10T 16/5275 . . . Latch hinge
- Y10T 16/528 . . Latch hinge
- Y10T 16/5285 . . . Resilient securing means
- Y10T 16/529 . . including lever for shifting one member of hinge relative to another
- Y10T 16/531 . . having staggered leaves
- Y10T 16/532 . . including adjustment for changing relative orientation of hinged members
- Y10T 16/5321 . . . having plural independent adjustments

Y10T 16/5322	. . . . All rectilinear
Y10T 16/53225	. . . . . including screw-operated means to move hinged members
Y10T 16/5323	. . . Pivotal adjustment
Y10T 16/53235	. . . . including screw-operated means to move hinged members
Y10T 16/53238	. . . . . About hinge axis
Y10T 16/5324	. . . including means to move hinged members
Y10T 16/53247	. . . . Along or parallel to hinge axis
Y10T 16/5325	. . . . . including threaded hinge pin
Y10T 16/53253	. . . . Screw-operated
Y10T 16/53257	. . . . . to shift plate toward or away from hinged member
Y10T 16/5326	. . . having adjustable spacer between leaf and hinged member [e.g., shim]
Y10T 16/5327	. . . Adjustable along or parallel to hinge axis
Y10T 16/5329	. . . having interdigitated surfaces or slot for hinge-to-member fastener
Y10T 16/533	. . having cover
Y10T 16/5335	. . . Leaf cover
Y10T 16/534	. . having clamp for attaching hinge to hinged member
Y10T 16/5345	. . . Circumferential clamp
Y10T 16/535	. . having means to facilitate assembly and disassembly of hinge sections to join or disjoin hinged members
Y10T 16/5353	. . . Resiliently biased hinge
Y10T 16/5355	. . . . having helical spring along hinge axis
Y10T 16/5357	. . . Resiliently biased retaining means
Y10T 16/5358	. . . . having discrete latch and spring to slide or pivot latch
Y10T 16/5359	. . . . Discrete retaining means for pivotal contacting surfaces
Y10T 16/536	. . . Separation of pivotal contacting surfaces
Y10T 16/53605	. . . . having movable or removable connector
Y10T 16/53607	. . . . . Pintle removable from remainder of hinge
Y10T 16/536075	. . . . . and additional connector for pintle or separate pintle sections
Y10T 16/53608	. . . . . Screw-threaded connector
Y10T 16/5361	. . . . Axially shifting hinge sections
Y10T 16/53613	. . . . . At specific angular orientation of hinge sections
Y10T 16/53615	. . . . Hook and pin
Y10T 16/5362	. . . . Hook in aperture
Y10T 16/53625	. . . . Hook to hook
Y10T 16/5363	. . . and discrete movable or removable connector to fasten one hinge section to another
Y10T 16/5367	. . . by relatively sliding connection [e.g., dovetail]
Y10T 16/5369	. . . . including receiving connector attachable to hinged member
Y10T 16/537	. . having means to reduce friction between hinge parts
Y10T 16/5373	. . . by fluid lubricant

Y10T 16/5377	. . .	Ball or roller bearing
Y10T 16/5379	. . . .	Circularly distributed balls or rollers
Y10T 16/538	. .	Resiliently biased hinge
Y10T 16/5381	. . .	including means to render spring ineffective through all or a portion of swing
Y10T 16/53815	. . . .	comprising manipulatable element or portion
Y10T 16/5382	. . .	Biased from either direction toward neutral position [e.g., double acting]
Y10T 16/53822	. . . .	Helical spring transverse to hinge axis
Y10T 16/53824	. . . .	Plural hinge axes [e.g., multiple pintle]
Y10T 16/53825	. . . . .	and barrels for helical springs on separate axes
Y10T 16/53826	. . . .	Resiliently biased rolling or sliding cam surface
Y10T 16/53828	. . . .	by helical spring along hinge axis
Y10T 16/5383	. . .	having transverse helical spring or elastic strip
Y10T 16/53832	. . . .	Plural hinge axes [e.g., multiple pintle]
Y10T 16/53833	. . . . .	Four or more axes
Y10T 16/53834	. . . .	to counterbalance weight of hinged member [e.g., closure biased to open position]
Y10T 16/53835	. . . . .	including pivoted coaxial spring retaining bar
Y10T 16/53836	. . . .	Over-center spring or linkage travel [e.g., "holdback hinge"]
Y10T 16/53838	. . . .	having means to hold hinged members against pivotal movement about hinge axis [i.e., catch]
Y10T 16/5384	. . .	Over-center spring or linkage travel [e.g., "holdback hinge"]
Y10T 16/53843	. . . .	Plural hinge axes
Y10T 16/53845	. . . .	Coil spring having axis along or parallel to hinge axis
Y10T 16/53848	. . . .	including camming or sliding surface to deflect spring perpendicularly to the hinge axis
Y10T 16/5385	. . .	having means to hold hinged members against pivotal movement about hinge axis [e.g., catch]
Y10T 16/5386	. . .	having force adjustment
Y10T 16/53862	. . . .	Rotatable spring-engaging collar
Y10T 16/538627	. . . . .	having detention aperture or protuberance
Y10T 16/538633	. . . . .	having tool-receiving aperture
Y10T 16/53864	. . .	Plural hinge axes [e.g., multiple pintle]
Y10T 16/5387	. . .	having axially biased camming surface
Y10T 16/5388	. . .	Coil
Y10T 16/53883	. . . .	Plural coils
Y10T 16/53885	. . . .	to counterbalance weight of hinged member [e.g., horizontal closure biased to open position]
Y10T 16/53888	. . . .	On pintle
Y10T 16/5389	. . .	torsion spring
Y10T 16/539	. .	Gravitating hinge having vertical axis
Y10T 16/5393	. . .	having lift rod

Y10T 16/5395	. . .	having plural spaced hinge axes
Y10T 16/5398	. . .	including cam surface and follower
Y10T 16/53984	. . . .	and rolling element
Y10T 16/53985	. . . .	Between opposing surfaces
Y10T 16/53987	. . . .	and detent in cam surface
Y10T 16/53988	. . . .	On axially twisted or helically fluted element
Y10T 16/53992	. . . .	including means to hold hinged members against pivotal movement
Y10T 16/53996	. . . .	having aperture for slidably receiving pintle [e.g., camming knuckle]
Y10T 16/54	. .	including means to hold or retard hinged members against pivotal movement [e.g., catch]
Y10T 16/5401	. . .	Magnetic
Y10T 16/5402	. . .	Resiliently biased catch
Y10T 16/54021	. . . .	having spring force adjustment
Y10T 16/54023	. . . .	including toggle linkage
Y10T 16/54024	. . . .	having discrete manipulatable release means [e.g., lever]
Y10T 16/540243	. . . . .	including cam or eccentric
Y10T 16/540247	. . . . .	Sliding release means or lever-actuated sliding catch
Y10T 16/54025	. . . .	Sliding
Y10T 16/540253	. . . . .	Movement along or parallel to hinge axis
Y10T 16/540254	. . . . .	Interdigitated or plural sockets
Y10T 16/540255	. . . . . .	Opposed interdigitated sliding collars on hinge axis
Y10T 16/540256	. . . . .	and catch receiving socket
Y10T 16/540257	. . . . .	and catch receiving socket
Y10T 16/54026	. . . .	Pivoted
Y10T 16/54028	. . . .	Plural alternately useable detents
Y10T 16/54029	. . . .	Spring arm
Y10T 16/540295	. . . . .	Plural opposed arms
Y10T 16/5403	. . .	by friction
Y10T 16/54033	. . . .	Screw-threaded adjustment
Y10T 16/54034	. . . . .	Along or parallel to hinge axis
Y10T 16/540345	. . . . .	Threaded pintle
Y10T 16/54035	. . . .	Cam or wedge actuator
Y10T 16/54038	. . . .	On hinge pin or between surfaces surrounding hinge axis
Y10T 16/5404	. . .	Pivoted
Y10T 16/54044	. . . .	Plural alternately useable detents
Y10T 16/54048	. . . .	and sliding
Y10T 16/54052	. . . .	Serially connected pivoted arms between leaves [e.g., brace]
Y10T 16/54056	. . . .	About axis along or parallel to hinge axis
Y10T 16/5406	. . .	by transversely moving pin in slot
Y10T 16/5407	. . .	having discrete manipulatable release means [e.g., lever operated]

- Y10T 16/5408 . . . by shifting hinged members
- Y10T 16/54085 Along hinge axis
- Y10T 16/5409 . . . Sliding
- Y10T 16/54095 Along or parallel to hinge axis
- Y10T 16/541 . . including toothed gear
- Y10T 16/542 . . comprising nested open curved portions attached to hinged members
- Y10T 16/543 . . . including hinge pin
- Y10T 16/544 . . including transversely moving pin in slot
- Y10T 16/5443 . . . Plural noncollinear pins and slots
- Y10T 16/5444 Parallel slots
- Y10T 16/5445 . . . having pin fixed to pivoted arm or plate
- Y10T 16/5448 . . . Hinge pin movable along slot
- Y10T 16/545 . . including sliding surfaces to permit relative translation of hinged members
- Y10T 16/5453 . . . and stop or abutment for pivotal movement
- Y10T 16/5457 . . . Movement transverse to hinge axis
- Y10T 16/546 . . Three-hinged members
- Y10T 16/547 . . having plural hinge axes [e.g., multiple pintle]
- Y10T 16/5472 . . . having transverse or skewed axes
- Y10T 16/5474 . . . Connected by serially arranged pivoted links between hinged members
- Y10T 16/5475 Plural sets of serially arranged pivoted links
- Y10T 16/5476 . . . Four or more axes
- Y10T 16/5478 . . . including stop or latch
- Y10T 16/548 . . including laminated leaf
- Y10T 16/549 . . Wire hinge
- Y10T 16/551 . . having stop or abutment
- Y10T 16/5513 . . . Adjustable or resilient
- Y10T 16/5515 . . . comprising relieved axially opposed relatively rotating surfaces
- Y10T 16/5518 . . . comprising platelike bearing portion curved about hinge axis
- Y10T 16/552 . . Hinge axis passes through hinged member [e.g., floor hinge]
- Y10T 16/5525 . . . Pintle or pivot concealed in hinged member
- Y10T 16/553 . . including means to retain pintle in hinge [e.g., tamper proof, nonrising pintle, etc.]
- Y10T 16/5535 . . . Threaded or slotted pintle or knuckle
- Y10T 16/554 . . including means to fasten leaf to member
- Y10T 16/5543 . . . by expandable connector
- Y10T 16/5547 . . . Self-penetrating fastener
- Y10T 16/555 . . Specified material
- Y10T 16/557 . . Specific pintle structure
- Y10T 16/558 . . Specific leaf structure
- Y10T 16/559 . . having prongs or cooperating structure on leaf

Y10T 16/5595	. . . Angular leaf sections
Y10T 16/55963	. . . . Parallel sections
Y10T 16/55975	. . . . Coplanar sections
Y10T 16/55988	. . . . including planar section perpendicular to hinge axis
Y10T 16/56	. Closers
Y10T 16/568	. . Spring and flexible link
Y10T 16/577	. . Spring and gear
Y10T 16/585	. . Spring and lever
Y10T 16/593	. . Spring
Y10T 16/595	. . . Bow
Y10T 16/597	. . . Rubber
Y10T 16/599	. . . torsional
Y10T 16/5995	. . . . Coil
Y10T 16/60	. . . Volute
Y10T 16/602	. . Weight
Y10T 16/61	. Closure checks
Y10T 16/615	. . Inertia
Y10T 16/62	. . Pneumatic
Y10T 16/625	. . Spring
Y10T 16/628	. . . Rubber
Y10T 16/6285	. . . . Rubber cushioned
Y10T 16/629	. . . . Multiple or opposed buffer surfaces
Y10T 16/6295	. . . . Link type
Y10T 16/6298	. Sash balances
Y10T 16/63	. . Cord and counterweight
Y10T 16/635	. . Sash and cord
Y10T 16/64	. . Spring
Y10T 16/641	. . . Drum and cord
Y10T 16/642	. . . Friction roller
Y10T 16/643	. . . Lever
Y10T 16/644	. . . Rack and pinion
Y10T 16/645	. . Rack and pinion
Y10T 16/65	. Sash-cord fasteners
Y10T 16/655	. . Bendable
Y10T 16/66	. . Chain
Y10T 16/665	. . Clamps
Y10T 16/67	. . Hooks
Y10T 16/675	. . Knot
Y10T 16/68	. . Slack-cord holders
Y10T 16/685	. . Weight

Y10T 16/69	. Sash-cord guides
Y10T 16/698	. . Wheel and casing
Y10T 16/706	. . Casings
Y10T 16/71	. . . Sheet metal, single piece
Y10T 16/714	. . Multiple wheel
Y10T 16/722	. . Sliding
Y10T 16/73	. Sash weights
Y10T 16/743	. . Composite
Y10T 16/755	. . Sectional
Y10T 16/767	. . Weight and wheel
Y10T 16/78	. Window-bead fasteners
Y10T 16/82	. Counterbalance device, <u>per se</u>
Y10T 16/84	. . Spring
Y10T 16/86	. Door escutcheon or similar element
Y10T 16/90	. Paper weight
Y10T 16/95	. Miscellaneous element or attachment

Former US Class 24 series

Y10T 24/00	Buckles, buttons, clasps, etc.
Y10T 24/10	. Miscellaneous
Y10T 24/11	. Album fasteners
Y10T 24/12	. Gun band type
Y10T 24/13	. Article holder attachable to apparel or body
Y10T 24/1303	. . Chatelaine safety hooks
Y10T 24/1306	. . Flower
Y10T 24/1309	. . . Pin attached
Y10T 24/1312	. . Napkin
Y10T 24/1315	. . . Hook
Y10T 24/1318	. . . Neck enclosing
Y10T 24/1321	. . Pencil
Y10T 24/1324	. . . Clasp attached
Y10T 24/1326	. . . . Finger ear, belt attached pencil holder
Y10T 24/1329	. . . . Pencil holder with paper clip
Y10T 24/1332	. . . . Combined and convertible pencil holder
Y10T 24/1335	. . . . Container type pencil holder
Y10T 24/1338	. . . . Separate pencil holder and pocket engaging clip
Y10T 24/1341	. . . . Sliding jaw pencil holding clip
Y10T 24/1344	. . . . Wire pencil holder
Y10T 24/1347	. . . . Flexible shank pencil holder

Y10T 24/135	. . . . with movable catch [e.g., pin pivoted lever, roller, etc.]
Y10T 24/1353	. . . . Pivoted jaw pencil holder
Y10T 24/1356	. . . Pin attached
Y10T 24/1359	. . . Rule holder
Y10T 24/1362	. . Sleeve holder [e.g., for inner coat]
Y10T 24/1365	. . Pin attached
Y10T 24/1368	. . Arm or leg carried holder
Y10T 24/1371	. . Eyeglass holder including retaining means
Y10T 24/1374	. . Neck supported holder
Y10T 24/1376	. . Holder contains pocket engager [e.g., antitheft device, wallet protector]
Y10T 24/1379	. . Key ring holder
Y10T 24/1382	. . Receptacle type holder
Y10T 24/1385	. . . Eyeglass or spectacle case
Y10T 24/1388	. . Open-ended holster type holder
Y10T 24/1391	. . Article held by clip with spring [e.g., leaf, coil] member
Y10T 24/1394	. . Article held by clip
Y10T 24/1397	. . Article held by flexible connector [e.g., chain]
Y10T 24/14	. Bale and package ties, hose clamps
Y10T 24/1402	. . Packet holders
Y10T 24/1404	. . . Cord
Y10T 24/1406	. . . Adjustable bands
Y10T 24/1408	. . . Closed loops
Y10T 24/141	. . . Plastic bands
Y10T 24/1412	. . with tighteners
Y10T 24/1414	. . . Wedge
Y10T 24/1416	. . . Winder
Y10T 24/1418	. . . Self-locking [dead center or snap action]
Y10T 24/142	. . . . Adjustable girth
Y10T 24/1422	. . . . . Rack bar
Y10T 24/1424	. . . Lever
Y10T 24/1427	. . . Worm and tooth
Y10T 24/1429	. . . . Pivotal worm band clamp
Y10T 24/1431	. . . . Radial worm band clamp
Y10T 24/1433	. . . Integral thread
Y10T 24/1435	. . . External thread
Y10T 24/1437	. . . . Both ends threaded
Y10T 24/1439	. . . Radial screw
Y10T 24/1441	. . . Tangential screw
Y10T 24/1443	. . . . Adjustable girth
Y10T 24/1445	. . . . . Step adjustment

Y10T 24/1447	. . . . .	Plural separable parts
Y10T 24/1449	. . . .	Wire
Y10T 24/1451	. . . .	Plural separable parts
Y10T 24/1453	. . . .	Pivotal strap parts
Y10T 24/1455	. . . .	Plural wrap
Y10T 24/1457	. .	Metal bands
Y10T 24/1459	. . .	Separate connections
Y10T 24/1461	. . . .	One piece
Y10T 24/1463	. . . . .	Sheet metal
Y10T 24/1465	. . . . .	Buckle band connection
Y10T 24/1467	. . . . .	Swedged sheet metal band connection
Y10T 24/1469	. . . . .	End-to-end integral with band connecting means
Y10T 24/1471	. . . .	Pivoted parts
Y10T 24/1473	. . . .	Wedging parts
Y10T 24/1476	. . . .	Wire
Y10T 24/1478	. . .	Circumferentially swagged band clamp
Y10T 24/148	. . .	End-to-end integral band end connection
Y10T 24/1482	. . .	Ratchet and tool tightened band clamp
Y10T 24/1484	. . .	Spring closed band clamp
Y10T 24/1486	. . .	Screw locked band clamp
Y10T 24/1488	. . .	Swedged to lock band ends
Y10T 24/149	. .	Wire
Y10T 24/1492	. . .	Separate connections
Y10T 24/1494	. . . .	Wire
Y10T 24/1496	. .	Wooden bands
Y10T 24/1498	. .	Plastic band
Y10T 24/15	. .	Bag fasteners
Y10T 24/152	. .	Swedged bag tie
Y10T 24/153	. .	Plastic band bag tie
Y10T 24/155	. .	Resilient slot bag tie
Y10T 24/157	. .	Twist-to-close bag tie
Y10T 24/158	. .	Slides to lock bag end within housing
Y10T 24/16	. .	Belt fasteners
Y10T 24/1604	. .	Tighteners
Y10T 24/1608	. .	Hinged
Y10T 24/1612	. . .	Ring connected belt ends
Y10T 24/1616	. . .	Bent over flanged ends
Y10T 24/162	. . .	Pintle pin connected belt ends
Y10T 24/1624	. . .	V and round belts
Y10T 24/1628	. . .	Overlapped belt ends

Y10T 24/1632	. . . Sheet metal knuckles, common pintle
Y10T 24/1636	. . . Wire knuckles, common pintle
Y10T 24/164	. . . Knuckle integral with belt material
Y10T 24/1644	. . . Multiple pintles interconnected V-belt type
Y10T 24/1648	. . Lacing
Y10T 24/1652	. . One piece
Y10T 24/1656	. . . Deflecting prong
Y10T 24/166	. . Screw clamp
Y10T 24/1664	. . Splices
Y10T 24/1668	. . Wire
Y10T 24/1672	. . Butt connected belt ends
Y10T 24/1676	. . V, round, trapezoidal belts
Y10T 24/168	. . Flanged belt ends, connector hold ends
Y10T 24/1684	. . Lapped ends of endless belts
Y10T 24/1688	. . Hinged ends of endless belts
Y10T 24/1692	. . Wire strands reinforce belts
Y10T 24/1696	. . Hook and loop type fastener and zipper belt end connection
Y10T 24/17	. Buttoners
Y10T 24/18	. Cuff holder
Y10T 24/181	. . Adjustable
Y10T 24/183	. . Sleeve clasp and button for cuff
Y10T 24/184	. . Sleeve clasp and clasp for cuff
Y10T 24/185	. . Sleeve clasp and hook for cuff
Y10T 24/186	. . Sleeve clasp and pin for cuff
Y10T 24/188	. . Sleeve pin and button for cuff
Y10T 24/189	. . Pin fastener
Y10T 24/19	. Necktie fastener
Y10T 24/1903	. . Bands
Y10T 24/1907	. . . End-securing pin
Y10T 24/191	. . . Gripping
Y10T 24/1914	. . . Depressors
Y10T 24/1917	. . . . Button engaging
Y10T 24/1921	. . . . Pin or spur
Y10T 24/1924	. . Button engaging
Y10T 24/1928	. . . Adjustable
Y10T 24/1931	. . . Cord loop
Y10T 24/1934	. . . Pivoted or sliding jaw
Y10T 24/1938	. . . Pin attached
Y10T 24/1941	. . Collar button combined
Y10T 24/1945	. . . Clasp attached

Y10T 24/1948	. . . Pin attached
Y10T 24/1952	. . . Separable fastener
Y10T 24/1955	. . Tie, attached hook
Y10T 24/1959	. . Magnetic, adhesive, or snap type fastener connects tie to shirt
Y10T 24/1962	. . Tie engaging loop with shirt engaging fastener
Y10T 24/1966	. . Tie knot engaging and collar attaching
Y10T 24/1969	. . Tie clip and shirt clasp attaching
Y10T 24/1972	. . Tie clip and fastening pin
Y10T 24/1976	. . Tie pin with shirt fastener
Y10T 24/1979	. . Tie stiffener with shirt fastener
Y10T 24/1983	. . with pivotal jaws having spring means
Y10T 24/1986	. . Slider
Y10T 24/199	. . Ornamental
Y10T 24/1993	. . . Key shaped
Y10T 24/1997	. . Resilient clasp
Y10T 24/20	. Paper fastener
Y10T 24/201	. . with screw threaded or notch engaging securing means
Y10T 24/202	. . Resiliently biased
Y10T 24/203	. . . including means to open or close fastener
Y10T 24/204	. . . . Pivotaly mounted on pintle
Y10T 24/205	. . . One piece
Y10T 24/206	. . . . Mounted on support means
Y10T 24/207	. . Adhesive
Y10T 24/208	. . Corner fastened
Y10T 24/209	. . Paper-penetrating
Y10T 24/21	. Strap tighteners
Y10T 24/2102	. . Cam lever and loop
Y10T 24/2104	. . . Step adjusted
Y10T 24/2106	. . . . Ski boot and garment fasteners
Y10T 24/2108	. . . . Split ring tightener
Y10T 24/2109	. . . . Chain and rope tighteners
Y10T 24/2111	. . . . Tire chain tighteners
Y10T 24/2113	. . . . Strap tighteners
Y10T 24/2115	. . . . Jewelry
Y10T 24/2117	. . . Strap tighteners
Y10T 24/2119	. . . Tie chain tighteners
Y10T 24/2121	. . . Cargo tie down
Y10T 24/2123	. . . Cover fasteners
Y10T 24/2125	. . . Chain tighteners
Y10T 24/2126	. . . Strap tightener machine

Y10T 24/2128	. . . toggle actuated sliding jaw
Y10T 24/213	. . . Jewelry
Y10T 24/2132	. . . Split ring with tightener
Y10T 24/2134	. . . Concrete form panels
Y10T 24/2136	. . . Seat belt buckles
Y10T 24/2138	. . . Chain, cable, wire tighteners, and anchors
Y10T 24/214	. . . Envelope fasteners
Y10T 24/2142	. . . Ski boot and garment fasteners
Y10T 24/2143	. . Strap-attached folding lever
Y10T 24/2145	. . . toggle latch
Y10T 24/2147	. . . Strap tightener
Y10T 24/2149	. . . Tire antiskid strap tightener
Y10T 24/2151	. . . Seat belts
Y10T 24/2153	. . . Split ring fasteners
Y10T 24/2155	. . . Jewelry-watch straps
Y10T 24/2157	. . . Tie downs [covers, articles]
Y10T 24/2158	. . . Cable, wire, rope tightener
Y10T 24/216	. . . Ski boot and garment fasteners
Y10T 24/2162	. . . Dress hem raisers
Y10T 24/2164	. . Midline
Y10T 24/2166	. . Jewelry
Y10T 24/2168	. . Seat belt
Y10T 24/217	. . Accordion straps
Y10T 24/2172	. . Parallel poles clamp
Y10T 24/2174	. . form panels for walls
Y10T 24/2175	. . Cargo tie down
Y10T 24/2177	. . Chain tighteners
Y10T 24/2179	. . Split band with tightener
Y10T 24/2181	. . Tire chain tighteners
Y10T 24/2183	. . Ski, boot, and shoe fasteners
Y10T 24/2185	. . Fixed jaw with sliding or pivoted jaw
Y10T 24/2187	. . Rack and pinion and circular tighteners
Y10T 24/2189	. . Circular flange container clamp
Y10T 24/2191	. . Strap stretching tools, tighteners, and sealers
Y10T 24/2192	. . Buckle type
Y10T 24/2194	. . Integral piece
Y10T 24/2196	. . toggle
Y10T 24/2198	. . Stocking top
Y10T 24/22	. Trouser guards, clips, straps [e.g., above shoetops]
Y10T 24/23	. Bedclothes holders

- Y10T 24/24 . T-head nongripping, fabric engaging type
- Y10T 24/25 . Zipper or required component thereof
- Y10T 24/2502 . . Plural zippers
- Y10T 24/2504 . . . Zipper chain
- Y10T 24/2505 . . . having surface sealing structure
- Y10T 24/2507 . . having slider or interconnected sliders with access opening for diverse-art member
- Y10T 24/2509 . . Plural independently movable sliders
- Y10T 24/2511 . . with distinct, stationary means for anchoring slider
- Y10T 24/2513 . . . and for aligning surfaces or obstructing slider movement
- Y10T 24/2514 . . with distinct member for sealing surfaces
- Y10T 24/2516 . . with distinct separable-fastener
- Y10T 24/2518 . . having coiled or bent continuous wire interlocking surface
- Y10T 24/252 . . . with stringer tape interwoven or knitted therewith
- Y10T 24/2521 . . . with stringer tape having specific weave or knit pattern
- Y10T 24/2523 . . . with core encircled by coils or bends
- Y10T 24/2525 . . . with mounting portion having structural formations complementary to stitching
- Y10T 24/2527 . . . Attached by stitching
- Y10T 24/2529 String or stringer tape having distinctive property [e.g., heat sensitive]
- Y10T 24/253 . . . with stringer tape having distinctive property [e.g., heat sensitive]
- Y10T 24/2532 . . having interlocking surface with continuous cross section
- Y10T 24/2534 . . . Opposed interlocking surface having dissimilar cross section
- Y10T 24/2536 . . having interlocking surface formed from single member with varying cross section
- Y10T 24/2538 . . . Opposed surface having dissimilar cross section
- Y10T 24/2539 . . Interlocking surface constructed from plural elements in series
- Y10T 24/2541 . . . having either noninterlocking element in, interrupted, or unequal length series
- Y10T 24/2543 . . . with element structural feature unrelated to interlocking or securing portion
- Y10T 24/2545 . . . Dissimilar opposed elements
- Y10T 24/2546 . . . Wire element
- Y10T 24/2548 . . . Preattached to mounting cord
- Y10T 24/255 . . . having interlocking portion with specific shape
- Y10T 24/2552 including symmetrical formations on opposite walls for engaging mating elements
- Y10T 24/2554 including complementary formations on opposite walls for engaging mating elements
- Y10T 24/2555 Mating elements having reversed orientation of formations
- Y10T 24/2557 . . . having mounting portion with specific shape or structure
- Y10T 24/2559 including embracing jaws

- Y10T 24/2561 . . Slider having specific configuration, construction, adaptation, or material
- Y10T 24/2563 . . . including relatively movable spaced wings [i.e., restraining walls]
- Y10T 24/2564 . . . including converging channel and relatively movable separator island
- Y10T 24/2566 . . . including position locking-means attached thereto
- Y10T 24/2568 Protrusion on pull tab directly engaging interlocking surfaces
- Y10T 24/257 having surface engaging element shifted by reorientation of pull tab
- Y10T 24/2571 Resilient or spring biased element
- Y10T 24/2573 Selectively shifted by either of two pull tabs
- Y10T 24/2575 with relatively movable link
- Y10T 24/2577 Biased by distinct spring
- Y10T 24/2579 having aperture cooperating with guide post
- Y10T 24/258 . . . including means preventing bunching of structure-to-be-secured or stringer
- Y10T 24/2582 . . . having specific contour or arrangement of converging channel, separator island, or wing
- Y10T 24/2584 Spaced segments of each wall of channel supported by different wings
- Y10T 24/2586 . . . including pull tab attaching means
- Y10T 24/2588 . . . including means for attaching components of slider together
- Y10T 24/2589 . . . with ornamental slider
- Y10T 24/2591 . . with means for concealing surfaces
- Y10T 24/2593 . . including complementary, aligning means attached to ends of interlocking surfaces
- Y10T 24/2595 . . . having specific mounting connection or reinforcing structure at connection
- Y10T 24/2596 . . including means attaching interlocking surfaces together
- Y10T 24/2598 . . including means for obstructing movement of slider
- Y10T 24/26 . . Slit closing means including guides on opposite edges of slit and slidable bridging component
- Y10T 24/262 . . with hand-actuated lever for shifting bridging component
- Y10T 24/264 . . including structure linking and allowing variations in separation between opposite-guide-contacting portions of component
- Y10T 24/266 . . having bridging components attached in series along carrying element
- Y10T 24/268 . . having separate, independently movable, bridging components
- Y10T 24/27 . . including readily dissociable fastener having numerous, protruding, unitary filaments randomly interlocking with, and simultaneously moving towards, mating structure [e.g., hook-loop type fastener]
- Y10T 24/2708 . . Combined with diverse fastener
- Y10T 24/2717 . . with distinct structure for sealing securement joint
- Y10T 24/2725 . . with feature facilitating, enhancing, or causing attachment of filament mounting surface to support therefor
- Y10T 24/2733 . . having filaments formed from continuous element interwoven or knitted into distinct, mounting surface fabric
- Y10T 24/2742 . . having filaments of varied shape or size on same mounting surface

- Y10T 24/275 . . with feature facilitating or causing attachment of filaments to mounting surface
- Y10T 24/2758 . . . Thermal or adhesive
- Y10T 24/2767 . . having several, repeating, interlocking formations along length of filaments
- Y10T 24/2775 . . having opposed structure formed from distinct filaments of diverse shape to those mating therewith
- Y10T 24/2783 . . having filaments constructed from coated, laminated, or composite material
- Y10T 24/2792 . . having mounting surface and filaments constructed from common piece of material
- Y10T 24/28 . Freight container to freight container fastener
- Y10T 24/29 . Drum or can spacer fastener
- Y10T 24/30 . Trim molding fastener
- Y10T 24/301 . . having externally threaded attaching means
- Y10T 24/302 . . . and laterally extending biasing appendage
- Y10T 24/303 . . having laterally extending biasing appendage
- Y10T 24/304 . . Resilient metal type
- Y10T 24/306 . . . Strip formed
- Y10T 24/307 . . . Sheet metal formed
- Y10T 24/308 . . . Wire formed
- Y10T 24/309 . . Plastic type
- Y10T 24/31 . Plural fasteners having intermediate flaccid connector
- Y10T 24/312 . . Chain connector
- Y10T 24/314 . . Elastic connector
- Y10T 24/316 . . . Strap connector
- Y10T 24/318 . . Strap connector
- Y10T 24/32 . having magnetic fastener
- Y10T 24/33 . having adhesive fastener
- Y10T 24/34 . Combined diverse multipart fasteners
- Y10T 24/3401 . . Buckle
- Y10T 24/3403 . . . and buckles
- Y10T 24/3404 having separate material adjustment means
- Y10T 24/3405 having separate disconnect means
- Y10T 24/3407 Pivotal lever type
- Y10T 24/3408 having disconnect structure
- Y10T 24/3409 Resilient cooperating means
- Y10T 24/3411 and pin
- Y10T 24/3412 Crossed belt accommodating
- Y10T 24/3413 . . . and clasp
- Y10T 24/3415 . . . and pin
- Y10T 24/3416 . . . and hook
- Y10T 24/3417 having disconnect means

Y10T 24/3419	. . . .	having penetrating prong
Y10T 24/342	. . . .	Buckle having plural receiving slots
Y10T 24/3421	. . .	including a button fastening element
Y10T 24/3423	. . .	and separable fastening means for attached fastener
Y10T 24/3424	. . . .	Snap fastener
Y10T 24/3425	. . .	having roller means
Y10T 24/3427	. .	Clasp
Y10T 24/3428	. . .	having pivoted members
Y10T 24/3429	. . . .	Cam type member
Y10T 24/3431	. . . .	Plural clasps
Y10T 24/3432	. . . . .	and toggle operator
Y10T 24/3433	. . . . .	Spring biased
Y10T 24/3435	. . . . .	Coil
Y10T 24/3436	. . . . .	and cam
Y10T 24/3437	. . . .	Coil spring biased
Y10T 24/3439	. . .	Plural clasps
Y10T 24/344	. . . .	Resilient type clasp
Y10T 24/3441	. . . . .	and cam
Y10T 24/3443	. . . . .	Spring biased jaw
Y10T 24/3444	. . . . .	Circular work engageable
Y10T 24/3445	. . . . .	and pin attachment
Y10T 24/3447	. . . . .	and disconnect means
Y10T 24/3448	. . .	including a button fastening element
Y10T 24/3449	. . .	and hook
Y10T 24/3451	. . . .	having intermediate connector allowing movement
Y10T 24/3452	. . . . .	and adjustment means
Y10T 24/3453	. . . .	having gripping configuration on clasp jaw
Y10T 24/3455	. . . . .	Penetrating type
Y10T 24/3456	. . . .	having cam
Y10T 24/3457	. . . .	having separable jaws
Y10T 24/3459	. . .	and penetrating prong
Y10T 24/346	. . .	and pin
Y10T 24/3461	. . . .	having separate pin loss prevention means
Y10T 24/3463	. . . . .	Pin coextensive, coplanar, and contiguous with clasp jaw
Y10T 24/3464	. . . .	Pin coextensive, coplanar, and contiguous with clasp jaw
Y10T 24/3465	. . . .	Pin forms part of clasp jaw
Y10T 24/3467	. .	Pin
Y10T 24/3468	. . .	and pin
Y10T 24/3469	. . . .	and disconnect means
Y10T 24/3471	. . . . .	Hook and eye type

Y10T 24/3472	. . . . and hook
Y10T 24/3473	. . . . . having connector allowing movement
Y10T 24/3475	. . . . . having intermediate connector allowing movement
Y10T 24/3476	. . . . and hook
Y10T 24/3477	. . . . . having intermediate connector allowing movement
Y10T 24/3479	. . . . . and adjustment means
Y10T 24/348	. . . . . Hook having locking means
Y10T 24/3481	. . . . including a button fastening element
Y10T 24/3483	. . . . and penetrating prong
Y10T 24/3484	. . . Hook
Y10T 24/3485	. . . . and hook
Y10T 24/3487	. . . . . having biasing spring
Y10T 24/3488	. . . . . Separately connected
Y10T 24/3489	. . . . . having securing means
Y10T 24/3491	. . . . . Sliding
Y10T 24/3492	. . . . . Snap type
Y10T 24/3493	. . . . . Pivoted
Y10T 24/3495	. . . . having penetrating prong
Y10T 24/3496	. . . . including a button fastening element
Y10T 24/3497	. . . Button fastening element including another fastener element
Y10T 24/3499	. . . Penetrating prong
Y10T 24/35	. . Interchangeable button loop and pin
Y10T 24/36	. . Button with fastener
Y10T 24/3602	. . . Loss-preventing devices
Y10T 24/3604	. . . Adjustable
Y10T 24/3606	. . . Cloth shanks and covers
Y10T 24/3609	. . . Multiple attachment
Y10T 24/3611	. . . Deflecting prong or rivet
Y10T 24/3613	. . . . Anvil or plate
Y10T 24/3615	. . . . Integral
Y10T 24/3617	. . . Hinged leaf
Y10T 24/3619	. . . . Axially rotating
Y10T 24/3621	. . . . Double
Y10T 24/3623	. . . . Sliding
Y10T 24/3626	. . . Sliding bar
Y10T 24/3628	. . . Integral or rigid stud
Y10T 24/363	. . . . Bent sheet metal [integral]
Y10T 24/3632	. . . Link
Y10T 24/3634	. . . . Integral rubber button, extendable shank
Y10T 24/3636	. . . . Extendably connected

Y10T 24/3638	. . .	Pivoted leaf
Y10T 24/364	. . .	Releasably locked
Y10T 24/3643	. . .	French cuff
Y10T 24/3645	. . .	Tufting
Y10T 24/3647	. . .	Integral piece
Y10T 24/3649	. .	Pin attached
Y10T 24/3651	. .	Separable
Y10T 24/3653	. . .	Screw
Y10T 24/3655	. . .	Spring
Y10T 24/3657	. . . .	Resilient head
Y10T 24/366	. . . .	Resilient socket
Y10T 24/3662	. . . .	Rotating head
Y10T 24/3664	. . . .	with operating devices
Y10T 24/3666	. .	Separate thread bar
Y10T 24/3668	. .	Spiral fastener
Y10T 24/367	. .	Covers
Y10T 24/3672	. . .	Metal or plastic caps
Y10T 24/3674	. .	Pads
Y10T 24/3677	. .	Flexible button
Y10T 24/3679	. .	Swivel button
Y10T 24/3681	. .	Tufting type
Y10T 24/3683	. .	Button with cavity for friction grip fastener
Y10T 24/3685	. .	Button with shank for friction grip fastener
Y10T 24/3687	. .	Heat or adhesive secured type
Y10T 24/3689	. .	Thread or wire through apertured button
Y10T 24/3691	. .	Eye shank type button
Y10T 24/3694	. .	Ornamental type
Y10T 24/3696	. .	for cuff or collar
Y10T 24/3698	. .	Fabric embracing
Y10T 24/37	. .	Drawstring, laced-fastener, or separate essential cooperating device therefor
Y10T 24/3703	. .	Includes separate device for holding drawn portion of lacing
Y10T 24/3705	. . .	Device engages tie in lacing
Y10T 24/3708	. . . .	and fully covers tie
Y10T 24/3711	. . .	Device engages element or formation on lacing
Y10T 24/3713	. . .	having relatively movable holding components or surfaces
Y10T 24/3716	. . . .	with pivotal connection therebetween
Y10T 24/3718	. . . .	with integral resilient linking structure therebetween
Y10T 24/3721	. . . . .	formed from wire
Y10T 24/3724	. . .	having lacing wound thereabout or wedged therein
Y10T 24/3726	. .	with holding means fixedly mounted on lacing

Y10T 24/3729	. . . and forming lacing tips
Y10T 24/3732	. . Includes lacing holding structure within directing means therefor
Y10T 24/3734	. . having diverse shaped directing means for lacing
Y10T 24/3737	. . having lacing directing means in particular pattern
Y10T 24/3739	. . Includes lacing guiding roller within directing means
Y10T 24/3742	. . having eyelet type directing means
Y10T 24/3745	. . . with permanently deformed mounting structure
Y10T 24/3747	. . . . Mounting structure formed from different material than directing passage
Y10T 24/375	. . having hook shaped directing means
Y10T 24/3753	. . . and movable component or surface for closing throat
Y10T 24/3755	. . . Mounted by structure allowing bodily movement thereof
Y10T 24/3758	. . . formed from wire
Y10T 24/3761	. . . with mounting structure formed from different material
Y10T 24/3763	. . . with permanently deformed mounting structure
Y10T 24/3766	. . . . Expanding stud
Y10T 24/3768	. . having loop or sleeve shaped directing means
Y10T 24/3771	. . . Entirely formed from flaccid material
Y10T 24/3774	. . . Mounted by structure allowing bodily movement thereof
Y10T 24/3776	. . . formed from wire
Y10T 24/3779	. . . with permanently deformed mounting structure
Y10T 24/3782	. . . . Loop or sleeve closed when mounted
Y10T 24/3784	. . . . Expanding stud
Y10T 24/3787	. . having elastic segment in lacing
Y10T 24/3789	. . having means covering tip of lacing
Y10T 24/3792	. . . Tasseled
Y10T 24/3795	. . . with plural components
Y10T 24/3797	. . . with permanently deformed mounting structure
Y10T 24/38	. Strap cable or pipe button
Y10T 24/39	. Cord and rope holders
Y10T 24/3902	. . Chain
Y10T 24/3904	. . . Bead chain fasteners
Y10T 24/3907	. . Sheathed strand
Y10T 24/3909	. . Plural-strand cord or rope
Y10T 24/3911	. . Friction disk
Y10T 24/3913	. . Knot engaging
Y10T 24/3916	. . One-piece
Y10T 24/3918	. . . Wedge slot
Y10T 24/392	. . . Wire
Y10T 24/3922	. . . . Cord runs through center of coil

Y10T 24/3924	. . .	Sheet material
Y10T 24/3927	. . .	Slack adjuster
Y10T 24/3929	. . .	Rubber
Y10T 24/3931	. . .	Wire
Y10T 24/3933	. . .	Swagged, deformable
Y10T 24/3936	. .	Pivoted part
Y10T 24/3938	. . .	Lever tension
Y10T 24/394	. . .	Cam lever
Y10T 24/3942	. . . .	Laterally shifted rope
Y10T 24/3944	. . . .	Cam engaging or disengaging
Y10T 24/3947	. . . .	Fixed and movable jaws, movable jaw pulled
Y10T 24/3949	. . . .	Link-connected parallel jaws
Y10T 24/3951	. . . .	Dual cam
Y10T 24/3953	. . .	Pivotal means with plate aperture
Y10T 24/3956	. . .	Jaws locked together by cam, wedge, lever, or screw
Y10T 24/3958	. .	Screw clamp
Y10T 24/396	. . .	Screw clamp with snubber
Y10T 24/3962	. . .	Tangential bolt
Y10T 24/3964	. . .	J-shaped bolt
Y10T 24/3967	. . .	Bolt perpendicular to cable axis
Y10T 24/3969	. .	Sliding part or wedge
Y10T 24/3971	. . .	Rope looped about movable member
Y10T 24/3973	. . .	Rope clamped between cone and socket
Y10T 24/3976	. . .	Sliding ball
Y10T 24/3978	. . .	Screw actuated
Y10T 24/398	. .	Bendable, ductible
Y10T 24/3982	. .	Safety release
Y10T 24/3984	. .	Alignable aperture and spring pressed moving element
Y10T 24/3987	. .	Loop, adjustable
Y10T 24/3989	. .	Snubbers, cleats by dielectric loss
Y10T 24/3991	. .	Loop engaging
Y10T 24/3993	. .	Ball or roller
Y10T 24/3996	. .	Sliding wedge
Y10T 24/3998	. .	Helical preform
Y10T 24/40	. .	Buckles
Y10T 24/4002	. .	Harness
Y10T 24/4005	. . .	Combined buckles and snap hooks
Y10T 24/4007	. . .	Lock
Y10T 24/4009	. . . .	Key
Y10T 24/4012	. . .	Clamping

Y10T 24/4014	. . . . One-piece
Y10T 24/4016	. . . . Pivoted part or lever
Y10T 24/4019	. . . . Sliding part or wedge
Y10T 24/4021	. . . Cross bails
Y10T 24/4023	. . . . Pivoted stud plate
Y10T 24/4026	. . . . Rigid stud
Y10T 24/4028	. . . Penetrating tongue
Y10T 24/403	. . . . Guarded
Y10T 24/4033	. . . . One-piece
Y10T 24/4035	. . . . Multiple
Y10T 24/4037	. . . . Pivoted
Y10T 24/404	. . . . . Lever actuated
Y10T 24/4042	. . . . . Stud
Y10T 24/4044	. . . . Sliding part or wedge
Y10T 24/4047	. . . Strap loops and attaching devices
Y10T 24/4049	. . . Loop shields
Y10T 24/4051	. . Garment shielded
Y10T 24/4053	. . Combined pressure bar and guard
Y10T 24/4056	. . . Hook attached
Y10T 24/4058	. . Penetrating prong
Y10T 24/406	. . . One-piece
Y10T 24/4063	. . . . Hook attached
Y10T 24/4065	. . . Pivoted
Y10T 24/4067	. . . . Hook attached
Y10T 24/407	. . . Slide
Y10T 24/4072	. . Pivoted lever
Y10T 24/4074	. . . Hook attached
Y10T 24/4077	. . . Looped strap
Y10T 24/4079	. . Sliding part of wedge
Y10T 24/4081	. . . Hook attached
Y10T 24/4084	. . . Looped strap
Y10T 24/4086	. . Looped strap
Y10T 24/4088	. . One-piece
Y10T 24/4091	. . . Hook attached
Y10T 24/4093	. . . Looped strap
Y10T 24/4095	. . Fabric covered
Y10T 24/4098	. . Ornamental and/or object supported
Y10T 24/41	. Pierced earring fastener
Y10T 24/42	. Independent, headed, aperture pass-through fastener

- Y10T 24/43 . Fastener with revolving component wrapping structure-to-be-secured about fastener
- Y10T 24/44 . Clasp, clip, support-clamp, or required component thereof
- Y10T 24/44009 . . Gripping member adapted for tool actuation or release
- Y10T 24/44017 . . with specific mounting means for attaching to rigid or semirigid supporting structure or structure-to-be-secured
- Y10T 24/44026 . . . for cooperating with aperture in supporting structure or structure-to-be-secured
- Y10T 24/44034 . . Dissociable gripping members
- Y10T 24/44043 . . . Channel and inserted bar
- Y10T 24/44051 having operator or locking means
- Y10T 24/4406 Resilient channel or bar
- Y10T 24/44068 . . having gripping member actuated by fluid force
- Y10T 24/44077 . . having inserted and receiving interlocking members connected by bendable, nonbiasing strap
- Y10T 24/44085 . . . Discrete flaccid strap
- Y10T 24/44094 with distinct means for preventing separation of members
- Y10T 24/44103 Slidably mounted
- Y10T 24/44111 with separate flaccid flap or pocket for protecting structure-to-be-secured
- Y10T 24/4412 with separate, cavity-blocking gate on receiving member
- Y10T 24/44128 Resilient inserted or receiving member
- Y10T 24/44137 Inserted or receiving member substantially covered or coated for protection or to promote gripping
- Y10T 24/44145 Resilient inserted member
- Y10T 24/44154 having engaging face formed from nonmetallic material
- Y10T 24/44162 having head and neck type engaging face
- Y10T 24/44171 having internal supporting or reinforcing element
- Y10T 24/44179 Circular head or neck
- Y10T 24/44188 having wedge shaped, inserted and receiving members
- Y10T 24/44197 with specific means for attaching to flaccid strap or supporting strap
- Y10T 24/44205 On the inserted member
- Y10T 24/44214 having necked button sliding along length of closed, variable width loop
- Y10T 24/44222 . . having flaccid gripping member
- Y10T 24/44231 . . . formed from elastic material
- Y10T 24/44239 . . Encircling gripping member including semirigid band and operator for tightening
- Y10T 24/44248 . . Encircling gripping member including semirigid band and means for adjusting girth
- Y10T 24/44256 . . with specifically shaped, nongripping, rigid structure for connecting independently operable clasps, clips, or support-clamps
- Y10T 24/44265 . . Gripping member face integral with or rigidly affixed to screw-driving portion

- Y10T 24/44274 . . . having either discrete flaccid or thin, nonbiasing, integral, connecting hinge
- Y10T 24/44282 . . . having equally spaced or continual gripping faces revolving about central axis
- Y10T 24/44291 . . . including pivoted gripping member
- Y10T 24/44299 Pivoted member also slides
- Y10T 24/44308 Tapered face
- Y10T 24/44316 Pivoting gripping member either supports or coacts with sliding engaging face
- Y10T 24/44325 having three or more pivotally connected gripping members
- Y10T 24/44333 having toggle operator for moving
- Y10T 24/44342 having rigid linking arm pivotally connected to each gripping member
- Y10T 24/4435 with extended lever portion
- Y10T 24/44359 having lever end modified for attachment to support
- Y10T 24/44368 Pivoted gripping member applies camming force
- Y10T 24/44376 Spring or resiliently biased about pivot
- Y10T 24/44385 Distinct spring
- Y10T 24/44393 Attached solely by spring
- Y10T 24/44402 with operator for moving pivoted member
- Y10T 24/4441 Camming or wedging element
- Y10T 24/44419 Pivoted or rotated element
- Y10T 24/44427 with position locking-means for gripping members
- Y10T 24/44436 including pivoted arm
- Y10T 24/44444 having specific surface material or irregularity on or along engaging face
- Y10T 24/44453 having specific handle structure
- Y10T 24/44462 Coil spring
- Y10T 24/4447 having coil portion coaxial or parallel with pivotal axis
- Y10T 24/44479 Flat or leaf spring
- Y10T 24/44487 Closed by gravity or weight of structure-to-be-secured
- Y10T 24/44496 with operator means for moving pivoted member
- Y10T 24/44504 Threaded cylindrical rod and mating cavity
- Y10T 24/44513 Camming or wedging element
- Y10T 24/44521 Pivoted or rotated element
- Y10T 24/4453 with position locking-means for gripping members
- Y10T 24/44538 Integral locking-means
- Y10T 24/44547 having inserted and receiving interlocking engaging faces
- Y10T 24/44556 Resilient gripping member
- Y10T 24/44564 having specific surface material or irregularity on or along engaging face
- Y10T 24/44573 . . . including track or way guided and retained gripping member
- Y10T 24/44581 Biased by distinct spring
- Y10T 24/4459 with operator for moving guided member

Y10T 24/44598	. . . . Threaded cylindrical rod and mating cavity
Y10T 24/44607	. . . Track or way oblique to path of gripping member
Y10T 24/44615	. . . with position locking-means for gripping members
Y10T 24/44624	. . . . Integral locking-means
Y10T 24/44632	. . . with specific mounting means for attaching to flaccid supporting structure or structure-to-be-secured
Y10T 24/44641	. . having gripping member formed from, biased by, or mounted on resilient member
Y10T 24/4465	. . . Integrally combined, independently operable, diverse clasps, clips, or support-clamps
Y10T 24/44658	. . . with specific means for mounting to flaccid supporting structure or structure-to-be-secured
Y10T 24/44667	. . . . Mounting means made entirely from integral wire portion of resilient gripping member
Y10T 24/44675	. . . . . Wire coiled about flaccid supporting structure
Y10T 24/44684	. . . with operator for moving biased engaging face
Y10T 24/44692	. . . . Camming or wedging element
Y10T 24/44701	. . . . . Encircling sleeve type element
Y10T 24/44709	. . . . . Pivoted or rotated element
Y10T 24/44718	. . . . . Element pivots or rotates in plane parallel to plane bisecting opposed engaging faces
Y10T 24/44726	. . . . . Elongated element with pivot between cam and handle portions
Y10T 24/44735	. . . . . for moving engaging face of U-shaped gripping member
Y10T 24/44744	. . . with position locking-means for engaging faces
Y10T 24/44752	. . . . Integral locking-means
Y10T 24/44761	. . . . Pivoted lock member
Y10T 24/44769	. . . Opposed engaging faces on gripping member formed from single piece of resilient material
Y10T 24/44778	. . . . Piece totally forms clasp, clip, or support-clamp and has shaped, wirelike, or bandlike configuration with uniform cross section throughout its length
Y10T 24/44786	. . . . Opposed faces located in and bias towards common plane in nonuse position
Y10T 24/44795	. . . . Resilient gripping member having tightly twisted portion
Y10T 24/44803	. . . . Resilient gripping member having coiled portion
Y10T 24/44812	. . . . . Convolutions of coil form faces
Y10T 24/44821	. . . . Relatively movable segments of resilient gripping member contact and cross in nonuse position
Y10T 24/44829	. . . . . Segments form opposed engaging faces
Y10T 24/44838	. . . . . having specific handle structure
Y10T 24/44846	. . . . . having specific handle structure
Y10T 24/44855	. . . . Terminal end of resilient member having engagement or disengagement enhancing structural modifications

Y10T 24/44863	. . . . .	having specific surface irregularity on or along engaging face
Y10T 24/44872	. . . . .	having specific handle structure
Y10T 24/4488	. . . . .	Movably attached to gripping member
Y10T 24/44889	. . . . .	Interlocking faces
Y10T 24/44897	. . . . .	with reinforcing member
Y10T 24/44906	. . . . .	having specific surface irregularity on or along engaging face
Y10T 24/44915	. . . . .	Corrugated or toothed face
Y10T 24/44923	. . . . .	Clasp, clip, or support-clamp cut or shaped from a single sheet of resilient, uniformly thick, planar material
Y10T 24/44932	. . . . .	having specific surface material or irregularity on or along engaging face
Y10T 24/4494	. . . . .	having specific handle structure
Y10T 24/44949	. . . . .	including resilient biasing wire
Y10T 24/44957	. . . . .	Coiled wire
Y10T 24/44966	. . . . .	having gripping member shifted by operator
Y10T 24/44974	. . . . .	Threaded cylindrical rod and mating cavity
Y10T 24/44983	. . . . .	formed from single rigid piece of material
Y10T 24/44991	. . . . .	having specific surface irregularity on or along engaging face
Y10T 24/45	. . . . .	Separable-fastener or required component thereof [e.g., projection and cavity to complete interlock]
Y10T 24/45005	. . . . .	with third detached member completing interlock [e.g., hook type]
Y10T 24/4501	. . . . .	Quick connect or release [e.g., spring and detent]
Y10T 24/45016	. . . . .	for jewelry
Y10T 24/45021	. . . . .	including eyelet [e.g., shoes]
Y10T 24/45026	. . . . .	for key holder
Y10T 24/45031	. . . . .	for tire chain, strap, etc. [e.g., rotatable or sliding spring gate]
Y10T 24/45037	. . . . .	for apparel and related accessories
Y10T 24/45042	. . . . .	Button, button related
Y10T 24/45047	. . . . .	Snap [e.g., key hole type]
Y10T 24/45052	. . . . .	Post and receiver [e.g., pin and slot]
Y10T 24/45058	. . . . .	Hook [e.g., within cavity]
Y10T 24/45063	. . . . .	Belt, strap, etc. [e.g., buckle or snap fastener]
Y10T 24/45068	. . . . .	Glove
Y10T 24/45073	. . . . .	Purse, wallet, etc.
Y10T 24/45079	. . . . .	Belt, strap, harness, etc.
Y10T 24/45084	. . . . .	for safety belt buckle, strap, harness, etc.
Y10T 24/45089	. . . . .	Sliding or rotating element
Y10T 24/45094	. . . . .	Element having key slot
Y10T 24/45099	. . . . .	Resilient element [e.g., snap type]
Y10T 24/45105	. . . . .	for upholstery, panel, trim strip, etc. [e.g., spring biased]
Y10T 24/4511	. . . . .	Link with pivoted gate

Y10T 24/45115	. . . Hook
Y10T 24/4512	. . . . Snap with spring bias [e.g., gate]
Y10T 24/45126	. . . . for connecting chains [e.g., opposed pivoted hook]
Y10T 24/45131	. . . . for heavy load bearing device [e.g., chain, rope, cable, etc.]
Y10T 24/45136	. . . . . Haim, harness, whiffletree, rein, etc.
Y10T 24/45141	. . . for chain, rope, cable, etc.
Y10T 24/45147	. . . . Coupler with sliding socket to complete interlock
Y10T 24/45152	. . Each mating member having similarly shaped, sized, and operated interlocking or intermeshable face
Y10T 24/45157	. . . Zipper-type [e.g., slider]
Y10T 24/45162	. . . . for garment [e.g., with ribs and grooves interlocking elements]
Y10T 24/45168	. . . . for container [e.g., bag]
Y10T 24/45173	. . . Resilient element
Y10T 24/45178	. . . . Snap [e.g., identical elements]
Y10T 24/45183	. . . Clasp [e.g., spring type]
Y10T 24/45188	. . . . for jewelry [e.g., buckle type]
Y10T 24/45194	. . . . for belt or strap
Y10T 24/45199	. . . Hook
Y10T 24/45204	. . . . for belt, strap, etc. [e.g., with pivoted gate locking member]
Y10T 24/45209	. . . . for apparel
Y10T 24/45215	. . . Slot and tab or tongue
Y10T 24/4522	. . . Sliding or rotating element
Y10T 24/45225	. . including member having distinct formations and mating member selectively interlocking therewith
Y10T 24/4523	. . . Hook
Y10T 24/45236	. . . . Multiple catch [e.g., with pivoted gate]
Y10T 24/45241	. . . Slot and tab or tongue
Y10T 24/45246	. . . . having teeth or serrations [e.g., sliding with respect to each other]
Y10T 24/45251	. . . Resilient element [e.g., with spring]
Y10T 24/45257	. . . . Snap with cavity
Y10T 24/45262	. . . Pin, post and receiver
Y10T 24/45267	. . . Notched clasp [e.g., with receiving slot]
Y10T 24/45272	. . . Projection passes through cavity then moves toward noninserted portion of its member to complete interlock [e.g., snap hook]
Y10T 24/45277	. . . . Entire projection member forms loop or ring when interlocked
Y10T 24/45283	. . . . . Includes slidable gate closing entrance throat
Y10T 24/45288	. . . . Hook type projection member
Y10T 24/45293	. . . . . Plural hooks entering opposite sides of same cavity
Y10T 24/45298	. . . . . . Hooks formed solely from wire
Y10T 24/45304	. . . . . Noninserted portion of projection member includes movably connected gate for closing access throat

Y10T 24/45309	. . . . .	Threaded gate
Y10T 24/45314	. . . . .	Revolvably mounted disc shaped gate
Y10T 24/45319	. . . . .	Pivotally connected gate
Y10T 24/45325	. . . . .	Gate swings transversely to plane of hook
Y10T 24/4533	. . . . .	Gate also slides relative to pivot
Y10T 24/45335	. . . . .	having means biasing gate about pivot
Y10T 24/4534	. . . . .	and position locking-means for gate
Y10T 24/45346	. . . . .	Includes distinct biasing spring
Y10T 24/45351	. . . . .	Coil type spring
Y10T 24/45356	. . . . .	Coiled about pivotal axis of gate
Y10T 24/45361	. . . . .	having position locking-means for gate
Y10T 24/45366	. . . . .	Locking-means pivotally connected
Y10T 24/45372	. . . . .	Locking-means slidably mounted
Y10T 24/45377	. . . . .	Gate closes when structure-to-be-secured is tensioned
Y10T 24/45382	. . . . .	Track or way guided gate
Y10T 24/45387	. . . . .	having means biasing gate
Y10T 24/45393	. . . . .	Guide of gate encircles shank
Y10T 24/45398	. . . . .	Cavity in shank forms track or way
Y10T 24/45403	. . . . .	with position locking-means for gate
Y10T 24/45408	. . . . .	Resilient, self-biased gate
Y10T 24/45414	. . . . .	with position locking-means for gate
Y10T 24/45419	. . . . .	Gate and hook formed from plastic
Y10T 24/45424	. . . . .	Gate and hook formed solely from wire
Y10T 24/45429	. . . . .	Gate and hook formed from single piece of sheet metal
Y10T 24/45435	. . . . .	Projection pivotally attached to shank or mounting structure
Y10T 24/4544	. . . . .	Projection slidably mounted to shank or mounting structure
Y10T 24/45445	. . . . .	Projection self-biased towards shank or mounting structure
Y10T 24/4545	. . . . .	and formed solely from wire
Y10T 24/45455	. . . . .	Cooperating with relatively stationary wire gate
Y10T 24/45461	. . .	Interlocking portion actuated or released responsive to preselected condition [e.g., heat, pressure]
Y10T 24/45466	. . .	having electric or fluid powered, actuation or release, of interlock
Y10T 24/45471	. . .	Projection having movable connection between components thereof or variable configuration
Y10T 24/45476	. . . .	with additional, similar projection for engaging different cavity
Y10T 24/45482	. . . .	and operator therefor
Y10T 24/45487	. . . .	including camming or wedging element on projection member
Y10T 24/45492	. . . . .	Pivotally attached element
Y10T 24/45497	. . . .	including pivotal connection between projection components
Y10T 24/45503	. . . . .	Component slides relative to connection

Y10T 24/45508	. . . . .	and spring or resilient extension biasing about pivot
Y10T 24/45513	. . . . .	including slidably guided connection between nonself-biasing projection components
Y10T 24/45518	. . . . .	and distinct spring biasing component
Y10T 24/45524	. . . . .	including resiliently biased projection component or surface segment
Y10T 24/45529	. . . . .	Requiring manual force applied against bias to interlock or disengage
Y10T 24/45534	. . . . .	having connected leading edge and separated trailing arms
Y10T 24/45539	. . . . .	Cooperating with cavity having side walls and axially biased component capping end
Y10T 24/45545	. . . . .	forming total external surface of projection
Y10T 24/4555	. . . . .	and encircling hollow central area
Y10T 24/45555	. . . . .	having separate mounting means inserted into area
Y10T 24/4556	. . . . .	Plastic deformation of means or surface required for mounting
Y10T 24/45565	. . . . .	having separate mounting means encompassing cross section of projection
Y10T 24/45571	. . . . .	having dome-shaped head and expansion slit along side
Y10T 24/45576	. . . . .	and connected surface at tip of head
Y10T 24/45581	. . . . .	having inserted end formed by oppositely biased surface segments
Y10T 24/45586	. . . . .	Constructed from wire
Y10T 24/45592	. . . . .	having both resiliently biased and rigid components forming external surface of projection
Y10T 24/45597	. . . . .	Projection member including noninserted spring for engaging and pushing against receiving member
Y10T 24/45602	. . . . .	Receiving member includes either movable connection between interlocking components or variable configuration cavity
Y10T 24/45607	. . . . .	with additional cavity for engaging different projection
Y10T 24/45613	. . . . .	having common means actuating or releasing interlocking components or surfaces
Y10T 24/45618	. . . . .	and interlocking with independently associated or dissociated projection members
Y10T 24/45623	. . . . .	and operator therefor
Y10T 24/45628	. . . . .	for plural, oppositely shifting, similar interlocking components or segments
Y10T 24/45634	. . . . .	Operator includes camming or wedging element
Y10T 24/45639	. . . . .	including pivotally connected element on receiving member
Y10T 24/45644	. . . . .	for shifting pivotally connected interlocking component
Y10T 24/45649	. . . . .	Element and component pivot about same axis
Y10T 24/45654	. . . . .	for shifting slidably connected and guided, nonself-biasing interlocking component
Y10T 24/4566	. . . . .	including slidably connected and guided element on receiving member

Y10T 24/45665	. . . . .	for shifting pivotally connected interlocking component
Y10T 24/4567	. . . . .	for shifting slidably connected and guided, nonself-biasing, interlocking component
Y10T 24/45675	. . . . .	having pivotally connected interlocking component
Y10T 24/45681	. . . . .	Blocking removal of formation on projection from complementary formation on side wall of cavity
Y10T 24/45686	. . . . .	and position locking-means therefor
Y10T 24/45691	. . . . .	and relatively movable handle therefor
Y10T 24/45696	. . . . .	Requiring manual force thereon to interlock or disengage
Y10T 24/45702	. . . . .	Plural, oppositely shifting, similar interlocking components
Y10T 24/45707	. . . . .	having aperture therein alignable with parallel access opening
Y10T 24/45712	. . . . .	having interlocking portion thereof housed continuously within cavity
Y10T 24/45717	. . . . .	having cavity with side walls and axially biased component capping end
Y10T 24/45723	. . . . .	having slidably connected, nonself-biasing interlocking component
Y10T 24/45728	. . . . .	Blocking removal of formation on projection from complementary formation on side wall of cavity
Y10T 24/45733	. . . . .	and position locking-means therefor
Y10T 24/45738	. . . . .	and relatively movable handle therefor
Y10T 24/45743	. . . . .	Requiring manual force thereon to interlock or disengage
Y10T 24/45749	. . . . .	Plural, oppositely shifting, similar interlocking components
Y10T 24/45754	. . . . .	having closed aperture therethrough alignable with parallel access opening
Y10T 24/45759	. . . . .	having flaccid component defining access opening of cavity
Y10T 24/45764	. . . . .	Component formed solely by flaccid cord
Y10T 24/4577	. . . . .	with nonflaccid component
Y10T 24/45775	. . . . .	having resiliently biased interlocking component or segment
Y10T 24/4578	. . . . .	Cavity or projection rotates about axis of cavity to dissociate
Y10T 24/45785	. . . . .	Requiring manual force applied against bias to interlock or disengage
Y10T 24/45791	. . . . .	and partially blocking separate, nonresilient access opening of cavity
Y10T 24/45796	. . . . .	and closed elongated access opening for guiding transverse projection travel after insertion
Y10T 24/45801	. . . . .	Nonresilient walls define opening
Y10T 24/45806	. . . . .	formed from wire
Y10T 24/45812	. . . . .	and access opening with gapped perimeter for allowing movement of noninserted projection support therepast
Y10T 24/45817	. . . . .	Cavity constructed solely from wire
Y10T 24/45822	. . . . .	Partially blocking separate, nonresilient, access opening of cavity
Y10T 24/45827	. . . . .	and bodily shifted into or out of interlock location by manual force thereon

Y10T 24/45832	. . . . .	formed from wire
Y10T 24/45838	. . . . .	having curved or bent engaging section conforming to contour of projection
Y10T 24/45843	. . . . .	Similar, distinct sections
Y10T 24/45848	. . . . .	having distinct sections engaging projection at spaced points
Y10T 24/45853	. . . . .	including separate, nonprojection-engaging spring for biasing
Y10T 24/45859	. . . . .	Biased component or segment entirely formed from wire
Y10T 24/45864	. . . . .	having portion of cavity deformed during mounting
Y10T 24/45869	. . . . .	and cooperating with separate mounting component
Y10T 24/45874	. . . . .	having axially extending expansion slit along side of cavity
Y10T 24/4588	. . . . .	Means for mounting projection or cavity portion
Y10T 24/45885	. . . . .	Allows bodily movement facilitating interlock
Y10T 24/4589	. . . . .	About pivotal connection
Y10T 24/45895	. . . . .	Includes resilient component separate from portion
Y10T 24/45901	. . . . .	Allows relocation of portion
Y10T 24/45906	. . . . .	having component of means permanently deformed during mounting operation
Y10T 24/45911	. . . . .	and formed from or fixedly attached to projection or cavity portion
Y10T 24/45916	. . . . .	Cooperates with detached component of means
Y10T 24/45921	. . . . .	having shape facilitating impaling of mounting surface
Y10T 24/45927	. . . . .	and inserted into or through cavity or projection
Y10T 24/45932	. . . . .	and encircling cavity or projection
Y10T 24/45937	. . . . .	Consisting of thermally fusible substance
Y10T 24/45942	. . . . .	having threaded formation
Y10T 24/45948	. . . . .	having specific structure for cooperating with stitching
Y10T 24/45953	. . . . .	having shape facilitating impaling of mounting surface
Y10T 24/45958	. . . . .	Plural distinct cavities or projections
Y10T 24/45963	. . . . .	Hook type
Y10T 24/45969	. . . . .	Hook-shaped projection member passing through cavity
Y10T 24/45974	. . . . .	formed from single piece of sheet metal
Y10T 24/45979	. . . . .	formed solely from wire
Y10T 24/45984	. . . . .	Cavity having specific shape
Y10T 24/4599	. . . . .	including closed elongated access opening for guiding transverse projection travel after insertion
Y10T 24/45995	. . . . .	having access opening with gapped perimeter for allowing movement of noninserted projection support therepast
Y10T 24/46	. . . . .	Pin or separate essential cooperating device therefor
Y10T 24/4602	. . . . .	with separately operable, manually releasable, nonpenetrating means for mounting [e.g., drapery hook]
Y10T 24/4604	. . . . .	having distinct guiding, holding, or protecting means for penetrated portion
Y10T 24/4605	. . . . .	Means detachable from or flaccidly connected to pin [e.g., hatpin type]

Y10T 24/4607	. . . .	for pin having plural penetrating portions
Y10T 24/4609	. . . .	including relatively movable guiding, holding, or protecting components or surfaces
Y10T 24/4611	. . . . .	having operator for moving holding component or surface
Y10T 24/4613	. . . . .	Moves pivoting holding component
Y10T 24/4614	. . . . .	Moves slidably guided, nonself-biasing, holding component
Y10T 24/4616	. . . . .	having pierceable [e.g., cork] or naturally resilient [e.g., rubber] surfaces
Y10T 24/4618	. . . . .	with pivotal connection therebetween
Y10T 24/462	. . . . .	with slidable connection between nonself-biasing components
Y10T 24/4621	. . . . .	having resiliently biased component or surface
Y10T 24/4623	. . . . .	Coiled about longitudinal axis of held portion
Y10T 24/4625	. . . . .	and aperture therein alignable with another spaced aperture of means
Y10T 24/4627	. . . . .	and nonresilient structure for guiding portion thereto
Y10T 24/4629	. . . . .	including structure for cooperating with formation [e.g., cavity] formed on penetrating portion
Y10T 24/463	. . .	for pin having plural penetrating portions
Y10T 24/4632	. . . .	Each independently movable towards and into cooperation with means
Y10T 24/4634	. . .	including relatively movable guiding, holding, or protecting components or surfaces
Y10T 24/4636	. . . .	with connection allowing component to revolve about axis of held penetrating portion
Y10T 24/4638	. . . .	with pivotal connection therebetween
Y10T 24/4639	. . . . .	having position locking means therefor
Y10T 24/4641	. . . . .	Spring or resiliently biased
Y10T 24/4643	. . . . .	with slidable connection between nonself-biasing components
Y10T 24/4645	. . . . .	Component slides parallel to axis of held penetrating portion
Y10T 24/4646	. . . . .	Means engages formation formed on penetrating portion
Y10T 24/4648	. . . . .	having nonresilient and resilient components
Y10T 24/465	. . . . .	Means formed from single resilient wire
Y10T 24/4652	. . . . .	Means formed from resilient sheet metal
Y10T 24/4654	. . .	with independent, spaced, intermediate connections, or formations [e.g., coils], about which portion or means move
Y10T 24/4655	. . . .	Includes slidable connection
Y10T 24/4657	. . .	with pivotal connection between penetrating portion and means
Y10T 24/4659	. . . .	Connection also permits sliding movement
Y10T 24/4661	. . . .	Resiliently biased about connection
Y10T 24/4663	. . .	with slidable connection intermediate penetrating portion and means
Y10T 24/4664	. . .	having resilient bridging structure between portion and means

Y10T 24/4666	. . . . Means includes structure for cooperating with formation [e.g., cavity] formed on portion
Y10T 24/4668	. . . . and penetrating portion formed from wire
Y10T 24/467	. . . . . Bridging structure includes elongated nonwire element
Y10T 24/4671	. . . . . Wire also forms coiled bridging structure about which portion moves
Y10T 24/4673	. . . . . including distinct device for cooperating with coil
Y10T 24/4675	. . . . . having means also formed from same wire
Y10T 24/4677	. . with cavity for guiding structure-to-be-secured towards penetrating portion [e.g., stocking support]
Y10T 24/4679	. . having penetrating portion retractable or of changeable length
Y10T 24/468	. . having interconnected distinct penetrating portions
Y10T 24/4682	. . . Connection allows movement therebetween
Y10T 24/4684	. . . . Slidable connection
Y10T 24/4686	. . . . Resilient connection
Y10T 24/4688	. . . formed from common wire
Y10T 24/4689	. . . . and pointing in same direction
Y10T 24/4691	. . Penetrating portion includes relatively movable structure for resisting extraction
Y10T 24/4693	. . having specific wire penetrating portion
Y10T 24/4695	. . . Wire curved or bent
Y10T 24/4696	. . having distinct head structure
Y10T 24/4698	. . . Movably connected to penetrating portion
Y10T 24/47	. Strap-end-attaching devices
Y10T 24/4709	. . Bendable sheet material
Y10T 24/4718	. . Watch pintle connected
Y10T 24/4727	. . Webbing to tube [lawn chair]
Y10T 24/4736	. . Buckle connected
Y10T 24/4745	. . End clasp
Y10T 24/4755	. . Hook
Y10T 24/4764	. . Ring-loop
Y10T 24/4773	. . Cargo tiedown
Y10T 24/4782	. . Watch strap
Y10T 24/4791	. . Enlarged end epoxy
Y10T 24/48	. Pivoted edge stays
Y10T 24/49	. Fastener destructively secured by reshaping distortion force [e.g., ductile fastener]
Y10T 24/492	. . Distorted structure having shape facilitating impaling
Y10T 24/493	. . . and distinct fastener structure cooperating with impaled structure
Y10T 24/495	. . . . Detached cooperating structure
Y10T 24/497	. . . including plural impaling elements

- Y10T 24/498 Elements form single aperture [e.g., split shank type]
- Y10T 24/50 . Readily interlocking, two-part fastener requiring either destructive or tool disengagement
- Y10T 24/505 . . including additional fastener structure linking parts
- Y10T 24/51 . Hanger on portable article support for manual attachment thereof to overhead support [e.g., drapery hook]

Former US Class 29 Series

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|-------------------|---|
| Y10T 29/00 | Metal working |
| Y10T 29/10 | . Battery-grid making |
| Y10T 29/11 | . Bias [i.e. , helically] cutting of tubular stock |
| Y10T 29/1106 | . . including orbital cutter |
| Y10T 29/1113 | . . . within stock support |
| Y10T 29/1119 | . . . with orbiting strip accumulator |
| Y10T 29/1125 | . . including means to inflate stock |
| Y10T 29/1131 | . . with means to feed stock along support or mandrel |
| Y10T 29/1138 | . . . Single means produces compound motion |
| Y10T 29/1144 | Endless belt drive means |
| Y10T 29/115 | . . . Axially |
| Y10T 29/1156 | . . . Rotatably |
| Y10T 29/1163 | . . with means to rotate and store stock supply |
| Y10T 29/1169 | . . . Axis of rotation parallel to support or mandrel |
| Y10T 29/1175 | . . with means for arcuate shift of mandrel |
| Y10T 29/1181 | . . including means to handle produced strip or web |
| Y10T 29/1188 | . . . with common adjustment for cutter |
| Y10T 29/1194 | . . Method |
| Y10T 29/12 | . Buckle making |
| Y10T 29/13 | . Button-fastener making |
| Y10T 29/14 | . Shredding metal or metal wool article making |
| Y10T 29/142 | . . Metal wool making |
| Y10T 29/143 | . . . Shaving or longitudinal cutting |
| Y10T 29/145 | Soap-pad making |
| Y10T 29/147 | . . Metal wool bundling |
| Y10T 29/148 | . . . Soap-pad making |
| Y10T 29/15 | . Cord heddle making |
| Y10T 29/16 | . Cotter-pin making |
| Y10T 29/17 | . Crankshaft making apparatus |
| Y10T 29/18 | . Expanded metal making |
| Y10T 29/185 | . . by use of reciprocating perforator |
| Y10T 29/19 | . Eyebolt or hook making |

Y10T 29/20	. Fence barb making
Y10T 29/203	. . by use of reciprocating cutter or die
Y10T 29/207	. . by use of rotary cutter or die
Y10T 29/21	. Finger-ring forming or sizing
Y10T 29/22	. Fishhook making
Y10T 29/23	. Gem and jewel setting
Y10T 29/24	. Hinge making or assembling
Y10T 29/25	. Lacing-stud making
Y10T 29/26	. Paper-fastener making
Y10T 29/27	. Plow or cultivator iron making
Y10T 29/28	. Puddlers balls making
Y10T 29/29	. Railway-chair making
Y10T 29/30	. Foil or other thin sheet-metal making or treating
Y10T 29/301	. . Method
Y10T 29/302	. . . Clad or other composite foil or thin metal making
Y10T 29/303	. . . with assembling or disassembling of a pack
Y10T 29/304	. . . . Using transitory solid cover material
Y10T 29/305	. . . . including bond prevention treatment
Y10T 29/306	. . . . Disassembling of a pack
Y10T 29/307	. . . by shaving or longitudinal cutting
Y10T 29/308	. . . Using transitory material
Y10T 29/309	. . Means for opening or separating a pack
Y10T 29/31	. Spectacle-frame making
Y10T 29/32	. Spiral cutting of flat stock
Y10T 29/33	. Stereotype-plate finishing
Y10T 29/34	. Means for forming clench-tongue [eg, for tieband]
Y10T 29/35	. Tire upsetting, with cutting, punching, etc.
Y10T 29/36	. toothed-cylinder making apparatus [e.g. , texture working cylinder]
Y10T 29/37	. Impeller making apparatus
Y10T 29/38	. Type finishing and grooving
Y10T 29/39	. Venetian blind assembling
Y10T 29/40	. Umbrella-frame making
Y10T 29/41	. Barrier layer or semiconductor device making
Y10T 29/413	. . Barrier layer device making
Y10T 29/417	. . . Electrolytic device making [e.g., capacitor]
Y10T 29/42	. Piezoelectric device making
Y10T 29/43	. Electric condenser making
Y10T 29/435	. . Solid dielectric type
Y10T 29/44	. Filing
Y10T 29/442	. . of key article

Y10T 29/444	. . Continuous band type
Y10T 29/446	. . Reciprocating type
Y10T 29/448	. . File-blank stripper
Y10T 29/45	. Scale remover or preventor
Y10T 29/4506	. . for hollow workpiece
Y10T 29/4511	. . . Interior surface
Y10T 29/4517	. . Rolling deformation or deflection
Y10T 29/4522	. . . for wire or rod
Y10T 29/4528	. . with rotary head
Y10T 29/4533	. . Fluid impingement
Y10T 29/4539	. . . with heater
Y10T 29/4544	. . . Liquid jet
Y10T 29/455	. . . Airblast
Y10T 29/4556	. . Chainer
Y10T 29/4561	. . Scraper or scalper
Y10T 29/4567	. . Brush type
Y10T 29/4572	. . Mechanically powered operator
Y10T 29/4578	. . . Tack or needle type
Y10T 29/4583	. . . Hammer
Y10T 29/4589	. . . Blade or chisel
Y10T 29/4594	. . Hand tool
Y10T 29/46	. Burning in, wearing in, or oil burnishing
Y10T 29/47	. Burnishing
Y10T 29/471	. . of water laid fibrous article [e.g., paper]
Y10T 29/473	. . . Heated burnishing member
Y10T 29/474	. . . . Burnishing tool reciprocates across work surface
Y10T 29/476	. . Continuous feed
Y10T 29/477	. . of gear article
Y10T 29/479	. . by shot peening or blasting
Y10T 29/48	. Upholstered article making
Y10T 29/481	. . Method
Y10T 29/482	. . Tufting
Y10T 29/483	. . . with means to clench fastener
Y10T 29/484	. . . with means to insert guide pin or fastener
Y10T 29/486	. . Cover stretching
Y10T 29/487	. . Edge-roll forming
Y10T 29/488	. . form or holder
Y10T 29/489	. . . with follower
Y10T 29/49	. Method of mechanical manufacture
Y10T 29/49002	. . Electrical device making

Y10T 29/49004	. . .	including measuring or testing of device or component part
Y10T 29/49005	. . .	Acoustic transducer
Y10T 29/49007	. . .	Indicating transducer
Y10T 29/49009	. . .	Dynamoelectric machine
Y10T 29/49011	. . . .	Commutator or slip ring assembly
Y10T 29/49012	. . . .	Rotor
Y10T 29/49014	. . .	Superconductor
Y10T 29/49016	. . .	Antenna or wave energy "plumbing" making
Y10T 29/49018	. . . .	with other electrical component
Y10T 29/4902	. . .	Electromagnet, transformer or inductor
Y10T 29/49021	. . . .	Magnetic recording reproducing transducer [e.g., tape head, core, etc.]
Y10T 29/49023	. . . . .	including disassembly step
Y10T 29/49025	. . . . .	Making disc drive
Y10T 29/49027	. . . . .	Mounting preformed head/core onto other structure
Y10T 29/49028	. . . . .	Mounting multitrack head
Y10T 29/4903	. . . . .	with bonding
Y10T 29/49032	. . . . .	Fabricating head structure or component thereof
Y10T 29/49034	. . . . .	Treating to affect magnetic properties
Y10T 29/49036	. . . . .	including measuring or testing
Y10T 29/49037	. . . . . .	Using reference point/surface to facilitate measuring
Y10T 29/49039	. . . . . .	with dual gap materials
Y10T 29/49041	. . . . . .	with significant slider/housing shaping or treating
Y10T 29/49043	. . . . . .	Depositing magnetic layer or coating
Y10T 29/49044	. . . . . . .	Plural magnetic deposition layers
Y10T 29/49046	. . . . . . .	with etching or machining of magnetic material
Y10T 29/49048	. . . . . .	Machining magnetic material [e.g., grinding, etching, polishing]
Y10T 29/4905	. . . . . .	Employing workholding means
Y10T 29/49052	. . . . . .	by etching
Y10T 29/49053	. . . . . .	Multitrack heads having integral holding means
Y10T 29/49055	. . . . . .	with bond/laminating preformed parts, at least two magnetic
Y10T 29/49057	. . . . . . .	Using glass bonding material
Y10T 29/49059	. . . . . . .	with work positioning means
Y10T 29/4906	. . . . . .	Providing winding
Y10T 29/49062	. . . . . . .	Multilayered winding
Y10T 29/49064	. . . . . . .	by coating
Y10T 29/49066	. . . . . . .	Preformed winding
Y10T 29/49067	. . . . . . .	Specified diverse magnetic materials
Y10T 29/49069	. . . . .	Data storage inductor or core
Y10T 29/49071	. . . . .	by winding or coiling

Y10T 29/49073	. . . .	by assembling coil and core
Y10T 29/49075	. . . .	including permanent magnet or core
Y10T 29/49076	. . . . .	From comminuted material
Y10T 29/49078	. . . . .	Laminated
Y10T 29/4908	. . . . .	Acoustic transducer
Y10T 29/49082	. . . .	Resistor making
Y10T 29/49083	. . . .	Heater type
Y10T 29/49085	. . . .	Thermally variable
Y10T 29/49087	. . . .	with envelope or housing
Y10T 29/49089	. . . . .	Filling with powdered insulation
Y10T 29/49091	. . . . .	with direct compression of powdered insulation
Y10T 29/49092	. . . . .	Powdering the insulation
Y10T 29/49094	. . . . .	by oxidation
Y10T 29/49096	. . . . .	with winding
Y10T 29/49098	. . . . .	Applying terminal
Y10T 29/49099	. . . . .	Coating resistive material on a base
Y10T 29/49101	. . . . .	Applying terminal
Y10T 29/49103	. . . . .	Strain gauge making
Y10T 29/49105	. . . .	Switch making
Y10T 29/49107	. . . .	Fuse making
Y10T 29/49108	. . . .	Electric battery cell making
Y10T 29/4911	. . . . .	including sealing
Y10T 29/49112	. . . . .	including laminating of indefinite length material
Y10T 29/49114	. . . . .	including adhesively bonding
Y10T 29/49115	. . . . .	including coating or impregnating
Y10T 29/49117	. . . .	Conductor or circuit manufacturing
Y10T 29/49119	. . . . .	Brush
Y10T 29/49121	. . . . .	Beam lead frame or beam lead device
Y10T 29/49123	. . . . .	Co-axial cable
Y10T 29/49124	. . . . .	On flat or curved insulated base, e.g., printed circuit, etc.
Y10T 29/49126	. . . . .	Assembling bases
Y10T 29/49128	. . . . .	Assembling formed circuit to base
Y10T 29/4913	. . . . .	Assembling to base an electrical component, e.g., capacitor, etc.
Y10T 29/49131	. . . . .	by utilizing optical sighting device
Y10T 29/49133	. . . . .	with component orienting
Y10T 29/49135	. . . . .	and shaping, e.g., cutting or bending, etc.
Y10T 29/49137	. . . . .	Different components
Y10T 29/49139	. . . . .	by inserting component lead or terminal into base aperture
Y10T 29/4914	. . . . .	with deforming of lead or terminal
Y10T 29/49142	. . . . .	including metal fusion

Y10T 29/49144	. . . . .	by metal fusion
Y10T 29/49146	. . . . .	with encapsulating, e.g., potting, etc.
Y10T 29/49147	. . . . .	Assembling terminal to base
Y10T 29/49149	. . . . .	by metal fusion bonding
Y10T 29/49151	. . . . .	by deforming or shaping
Y10T 29/49153	. . . . .	with shaping or forcing terminal into base aperture
Y10T 29/49155	. . . . .	Manufacturing circuit on or in base
Y10T 29/49156	. . . . .	with selective destruction of conductive paths
Y10T 29/49158	. . . . .	with molding of insulated base
Y10T 29/4916	. . . . .	Simultaneous circuit manufacturing
Y10T 29/49162	. . . . .	by using wire as conductive path
Y10T 29/49163	. . . . .	with sintering of base
Y10T 29/49165	. . . . .	by forming conductive walled aperture in base
Y10T 29/49167	. . . . .	with deforming of conductive path
Y10T 29/49169	. . . . .	Assembling electrical component directly to terminal or elongated conductor
Y10T 29/49171	. . . . .	with encapsulating
Y10T 29/49172	. . . . .	by molding of insulating material
Y10T 29/49174	. . . . .	Assembling terminal to elongated conductor
Y10T 29/49176	. . . . .	with molding of electrically insulating material
Y10T 29/49178	. . . . .	by shrinking of cover
Y10T 29/49179	. . . . .	by metal fusion bonding
Y10T 29/49181	. . . . .	by deforming
Y10T 29/49183	. . . . .	of ferrule about conductor and terminal
Y10T 29/49185	. . . . .	of terminal
Y10T 29/49187	. . . . .	with forming eyelet from elongated conductor
Y10T 29/49188	. . . . .	with penetrating portion
Y10T 29/4919	. . . . .	Through insulation
Y10T 29/49192	. . . . .	with insulation removal
Y10T 29/49194	. . . . .	Assembling elongated conductors, e.g., splicing, etc.
Y10T 29/49195	. . . . .	with end-to-end orienting
Y10T 29/49197	. . . . .	including fluid evacuating or pressurizing
Y10T 29/49199	. . . . .	including deforming of joining bridge
Y10T 29/49201	. . . . .	with overlapping orienting
Y10T 29/49202	. . . . .	including oppositely facing end orienting
Y10T 29/49204	. . . . .	Contact or terminal manufacturing
Y10T 29/49206	. . . . .	by powder metallurgy
Y10T 29/49208	. . . . .	by assembling plural parts
Y10T 29/4921	. . . . .	with bonding
Y10T 29/49211	. . . . .	of fused material

Y10T 29/49213	. . . . .	Metal
Y10T 29/49215	. . . . .	by impregnating a porous mass
Y10T 29/49217	. . . . .	by elastic joining
Y10T 29/49218	. . . . .	with deforming
Y10T 29/4922	. . . . .	with molding of insulation
Y10T 29/49222	. . . . .	forming array of contacts or terminals
Y10T 29/49224	. . . . .	with coating
Y10T 29/49226	. . .	Electret making
Y10T 29/49227	. . .	Insulator making
Y10T 29/49229	. .	Prime mover or fluid pump making
Y10T 29/49231	. . .	I.C. [internal combustion] engine making
Y10T 29/49233	. . . .	Repairing, converting, servicing or salvaging
Y10T 29/49234	. . . .	Rotary or radial engine making
Y10T 29/49236	. . .	Fluid pump or compressor making
Y10T 29/49238	. . . .	Repairing, converting, servicing or salvaging
Y10T 29/4924	. . . .	Scroll or peristaltic type
Y10T 29/49242	. . . .	Screw or gear type, e.g., Moineau type
Y10T 29/49243	. . . .	Centrifugal type
Y10T 29/49245	. . . .	Vane type or other rotary, e.g., fan
Y10T 29/49247	. . .	Valve lifter making
Y10T 29/49249	. . .	Piston making
Y10T 29/4925	. . . .	Repairing, converting, servicing or salvaging
Y10T 29/49252	. . . .	Multi-element piston making
Y10T 29/49254	. . . . .	Utilizing a high energy beam, e.g., laser, electron beam
Y10T 29/49256	. . . . .	with assembly or composite article making
Y10T 29/49258	. . . . .	with thermal barrier or heat flow provision
Y10T 29/49259	. . . . .	with fiber reinforced structure
Y10T 29/49261	. . . . .	by composite casting or molding
Y10T 29/49263	. . . . .	by coating or cladding
Y10T 29/49265	. . . .	Ring groove forming or finishing
Y10T 29/49266	. . . .	Gudgeon pin, wrist pin, piston pin, or boss therefor
Y10T 29/49268	. . . .	with other attaching provision for connecting rod
Y10T 29/4927	. . .	Cylinder, cylinder head or engine valve sleeve making
Y10T 29/49272	. . . .	with liner, coating, or sleeve
Y10T 29/49274	. . .	Piston ring or piston packing making
Y10T 29/49275	. . . .	including forging or hammering
Y10T 29/49277	. . . .	including casting or molding
Y10T 29/49279	. . . .	including rolling or die forming, e.g., drawing, punching
Y10T 29/49281	. . . .	including coating or plating
Y10T 29/49282	. . . .	including grinding or honing

Y10T 29/49284	. . . .	including machining or angular cutting
Y10T 29/49286	. . .	Crankshaft making
Y10T 29/49288	. . .	Connecting rod making
Y10T 29/4929	. . . .	including metallurgical bonding
Y10T 29/49291	. . . .	including metal forging or die shaping
Y10T 29/49293	. . .	Camshaft making
Y10T 29/49295	. . .	Push rod or rocker arm making
Y10T 29/49297	. . .	Seal or packing making
Y10T 29/49298	. . .	Poppet or I.C. engine valve or valve seat making
Y10T 29/493	. . . .	Valve guide making
Y10T 29/49302	. . . .	Repairing, converting, servicing or salvaging
Y10T 29/49304	. . . .	Valve tappet making
Y10T 29/49306	. . . .	Valve seat making
Y10T 29/49307	. . . .	Composite or hollow valve stem or head making
Y10T 29/49309	. . . . .	including forging
Y10T 29/49311	. . . . .	including extruding
Y10T 29/49313	. . . . .	including casting
Y10T 29/49314	. . . .	with assembly or composite article making
Y10T 29/49316	. .	Impeller making
Y10T 29/49318	. . .	Repairing or disassembling
Y10T 29/4932	. . .	Turbomachine making
Y10T 29/49321	. . . .	Assembling individual fluid flow interacting members, e.g., blades, vanes, buckets, on rotary support member
Y10T 29/49323	. . . .	Assembling fluid flow directing devices, e.g., stators, diaphragms, nozzles
Y10T 29/49325	. . . .	Shaping integrally bladed rotor
Y10T 29/49327	. . .	Axial blower or fan
Y10T 29/49329	. . .	Centrifugal blower or fan
Y10T 29/4933	. . .	Fluid coupling device
Y10T 29/49332	. . .	Propeller making
Y10T 29/49334	. . . .	Utilizing hollow tube blank
Y10T 29/49336	. . .	Blade making
Y10T 29/49337	. . . .	Composite blade
Y10T 29/49339	. . . .	Hollow blade
Y10T 29/49341	. . . . .	with cooling passage
Y10T 29/49343	. . . . .	Passage contains tubular insert
Y10T 29/49345	. .	Catalytic device making
Y10T 29/49346	. .	Rocket or jet device making
Y10T 29/49348	. .	Burner, torch or metallurgical lance making
Y10T 29/4935	. .	Heat exchanger or boiler making

Y10T 29/49352	. . .	Repairing, converting, servicing or salvaging
Y10T 29/49353	. . .	Heat pipe device making
Y10T 29/49355	. . .	Solar energy device making
Y10T 29/49357	. . .	Regenerator or recuperator making
Y10T 29/49359	. . .	Cooling apparatus making, e.g., air conditioner, refrigerator
Y10T 29/49361	. . .	Tube inside tube
Y10T 29/49362	. . .	Tube wound about tube
Y10T 29/49364	. . .	Tube joined to flat sheet longitudinally, i.e., tube sheet
Y10T 29/49366	. . .	Sheet joined to sheet
Y10T 29/49368	. . . .	with inserted tubes
Y10T 29/49369	. . . .	Utilizing bond inhibiting material
Y10T 29/49371	. . . . .	with subsequent fluid expansion
Y10T 29/49373	. . .	Tube joint and tube plate structure
Y10T 29/49375	. . . .	including conduit expansion or inflation
Y10T 29/49377	. . .	Tube with heat transfer means
Y10T 29/49378	. . . .	Finned tube
Y10T 29/4938	. . . . .	Common fin traverses plurality of tubes
Y10T 29/49382	. . . . .	Helically finned
Y10T 29/49384	. . . . .	Internally finned
Y10T 29/49385	. . . . .	Made from unitary workpiece, i.e., no assembly
Y10T 29/49387	. . .	Boiler making
Y10T 29/49389	. . .	Header or manifold making
Y10T 29/49391	. . .	Tube making or reforming
Y10T 29/49393	. . .	with metallurgical bonding
Y10T 29/49394	. .	Accumulator making
Y10T 29/49396	. .	Condenser, evaporator or vaporizer making
Y10T 29/49398	. .	Muffler, manifold or exhaust pipe making
Y10T 29/494	. .	Fluidic or fluid actuated device making
Y10T 29/49401	. .	Fluid pattern dispersing device making, e.g., ink jet
Y10T 29/49403	. .	Tapping device making
Y10T 29/49405	. .	Valve or choke making
Y10T 29/49407	. . .	Repairing, converting, servicing or salvaging
Y10T 29/49409	. . .	Valve seat forming
Y10T 29/4941	. . .	Valve stem or tire valve making
Y10T 29/49412	. . .	with assembly, disassembly or composite article making
Y10T 29/49414	. . . .	Joining plural semi-circular components
Y10T 29/49416	. . . .	with material shaping or cutting
Y10T 29/49417	. . . . .	including molding or casting
Y10T 29/49419	. . . . .	including machining or drilling
Y10T 29/49421	. . . . .	including metallurgical bonding

Y10T 29/49423	. . . . .	including metal deforming
Y10T 29/49425	. . . . .	including metallurgical bonding
Y10T 29/49426	. . . . .	including metal shaping and diverse operation
Y10T 29/49428	. . . . .	Gas and water specific plumbing component making
Y10T 29/4943	. . . . .	Plumbing fixture making
Y10T 29/49432	. . . . .	Nozzle making
Y10T 29/49433	. . . . .	Sprayer
Y10T 29/49435	. . . . .	Flexible conduit or fitting therefor
Y10T 29/49437	. . . . .	Flue connector device making
Y10T 29/49439	. . . . .	Trap making
Y10T 29/4944	. . . . .	Return connector device making
Y10T 29/49442	. . . . .	T-shaped fitting making
Y10T 29/49444	. . . . .	Elbow or L-shaped fitting making
Y10T 29/49446	. . . . .	Ferrule making or reforming
Y10T 29/49448	. . . . .	Agricultural device making
Y10T 29/49449	. . . . .	Traction apparatus, e.g., for tractor
Y10T 29/49451	. . . . .	Harvester guard
Y10T 29/49453	. . . . .	Pulley making
Y10T 29/49455	. . . . .	Assembly
Y10T 29/49456	. . . . .	with shaping
Y10T 29/49458	. . . . .	Disc splitting to form pulley rim groove
Y10T 29/4946	. . . . .	Groove forming in sheet metal pulley rim
Y10T 29/49462	. . . . .	Gear making
Y10T 29/49464	. . . . .	Assembling of gear into force transmitting device
Y10T 29/49465	. . . . .	Gear mounting
Y10T 29/49467	. . . . .	Gear shaping
Y10T 29/49469	. . . . .	Worm gear
Y10T 29/49471	. . . . .	Roll forming
Y10T 29/49472	. . . . .	Punching or stamping
Y10T 29/49474	. . . . .	Die-press shaping
Y10T 29/49476	. . . . .	Gear tooth cutting
Y10T 29/49478	. . . . .	Gear blank making
Y10T 29/4948	. . . . .	with specific gear material
Y10T 29/49481	. . . . .	Wheel making
Y10T 29/49483	. . . . .	Railway or trolley wheel making
Y10T 29/49485	. . . . .	Multiple part or composite
Y10T 29/49487	. . . . .	with axle or hub
Y10T 29/49488	. . . . .	Steering wheel
Y10T 29/4949	. . . . .	Material winding, e.g., reel, spool
Y10T 29/49492	. . . . .	Land wheel

Y10T 29/49494	. . . .	Assembling tire to wheel body
Y10T 29/49496	. . . .	Disc type wheel
Y10T 29/49497	. . . . .	Assembling wheel disc to rim and hub
Y10T 29/49499	. . . . .	Assembling wheel disc to rim
Y10T 29/49501	. . . . .	with disc shaping
Y10T 29/49503	. . . . .	Integral rim and disc making
Y10T 29/49504	. . . . .	Disc shaping
Y10T 29/49506	. . . . .	Tensioned spoke type wheel making
Y10T 29/49508	. . . . .	Tensioning all spokes simultaneously
Y10T 29/4951	. . . . .	Tensioning spokes in series
Y10T 29/49512	. . . . .	Tensioning spokes individually
Y10T 29/49513	. . . . .	Compression, e.g., nontension, spoke type wheel making
Y10T 29/49515	. . . . .	Joining spokes to rim and hub
Y10T 29/49517	. . . . .	Joining spokes to rim
Y10T 29/49519	. . . . .	Joining spokes to hub
Y10T 29/4952	. . . . .	Making plural spokes from a single blank
Y10T 29/49522	. . . . .	Individual spoke making
Y10T 29/49524	. . . . .	Rim making
Y10T 29/49526	. . . . .	with assembling
Y10T 29/49528	. . . . .	Demountable rim making
Y10T 29/49529	. . . . .	Die-press shaping
Y10T 29/49531	. . . . .	Roller forming
Y10T 29/49533	. . . . .	Hub making
Y10T 29/49535	. . . . .	with assembling
Y10T 29/49536	. . . . .	Hub shaping
Y10T 29/49538	. . . . .	Tire making
Y10T 29/4954	. . . . .	Wheel trim making, e.g., wheel cover, hubcap
Y10T 29/49542	. . . . .	with means for retaining trim member on wheel
Y10T 29/49544	. . . .	Roller making
Y10T 29/49545	. . . .	Repairing or servicing
Y10T 29/49547	. . . .	Assembling preformed components
Y10T 29/49549	. . . . .	Work contacting surface element assembled to core
Y10T 29/49551	. . . . .	Work contacting surface wound about core
Y10T 29/49552	. . . . .	with prestressing of component by heat differential, e.g., shrink, fit
Y10T 29/49554	. . . . .	Work contacting surface having annular axial sections
Y10T 29/49556	. . . . .	Work contacting surface element assembled to end support members
Y10T 29/49558	. . . . .	Includes securing removable cover on roller
Y10T 29/4956	. . . . .	Fabricating and shaping roller work contacting surface element
Y10T 29/49561	. . . . .	toothed roller
Y10T 29/49563	. . . . .	with coating or casting about a core

Y10T 29/49565	. . .	One-piece roller making
Y10T 29/49567	. .	Dental appliance making
Y10T 29/49568	. . .	Orthodontic device making
Y10T 29/4957	. .	Sound device making
Y10T 29/49572	. . .	Hearing aid component making
Y10T 29/49574	. . .	Musical instrument or tuning fork making
Y10T 29/49575	. . .	including diaphragm or support therefor
Y10T 29/49577	. . .	Phonograph component making
Y10T 29/49579	. .	Watch or clock making
Y10T 29/49581	. . .	having arbor, pinion, or balance
Y10T 29/49583	. . .	having indicia, face, or dial
Y10T 29/49584	. . .	having case, cover, or back
Y10T 29/49586	. . .	having crown, stem, or pendent
Y10T 29/49588	. .	Jewelry or locket making
Y10T 29/4959	. . .	Human adornment device making
Y10T 29/49591	. . . .	Bracelet making
Y10T 29/49593	. . . .	Finger ring making
Y10T 29/49595	. . .	Latch, clasp, or fastener component making
Y10T 29/49597	. . .	Ornamental stock making
Y10T 29/49599	. .	Knob or knob shank making
Y10T 29/496	. .	Multiperforated metal article making
Y10T 29/49602	. . .	Coil wound wall screen
Y10T 29/49604	. . .	Filter
Y10T 29/49606	. .	Turnbuckle making
Y10T 29/49607	. .	Spring-head clip making
Y10T 29/49609	. .	Spring making
Y10T 29/49611	. . .	for vehicle or clutch
Y10T 29/49613	. . .	for human comfort
Y10T 29/49615	. . .	Resilient shock or vibration absorber utility
Y10T 29/49616	. .	Structural member making
Y10T 29/49618	. . .	Restoring existing member, e.g., reinforcing, repairing
Y10T 29/4962	. . .	Grille making
Y10T 29/49622	. . .	Vehicular structural member making
Y10T 29/49623	. . .	Static structure, e.g., a building component
Y10T 29/49625	. . . .	Openwork, e.g., a truss, joist, frame, lattice-type or box beam
Y10T 29/49627	. . . .	Frame component
Y10T 29/49629	. . . .	Panel
Y10T 29/49631	. . . .	Columnar member
Y10T 29/49632	. . . .	Metal reinforcement member for nonmetallic, e.g., concrete, structural element

Y10T 29/49634	. . . .	Beam or girder
Y10T 29/49636	. .	Process for making bearing or component thereof
Y10T 29/49638	. . .	Repairing
Y10T 29/49639	. . .	Fluid bearing
Y10T 29/49641	. . .	Linear bearing
Y10T 29/49643	. . .	Rotary bearing
Y10T 29/49645	. . . .	Thrust bearing
Y10T 29/49647	. . . .	Plain bearing
Y10T 29/49648	. . . . .	Self-adjusting or self-aligning, including ball and socket type, bearing and component making
Y10T 29/4965	. . . . .	Deforming socket to secure ball
Y10T 29/49652	. . . . .	Die-press shaping
Y10T 29/49654	. . . . .	having liner
Y10T 29/49655	. . . . .	having liner
Y10T 29/49657	. . . . .	Socket making
Y10T 29/49659	. . . . .	by molding or casting
Y10T 29/49661	. . . . .	Nonmetallic socket
Y10T 29/49663	. . . . .	by assembling
Y10T 29/49664	. . . . .	Ball making
Y10T 29/49666	. . . . .	with metallurgical bonding
Y10T 29/49668	. . . . .	Sleeve or bushing making
Y10T 29/4967	. . . . .	Nonmetallic
Y10T 29/49671	. . . . .	Strip or blank material shaping
Y10T 29/49673	. . . . .	Die-press shaping
Y10T 29/49675	. . . . .	having inner lining layer
Y10T 29/49677	. . . . .	having liner
Y10T 29/49679	. . . .	Anti-friction bearing or component thereof
Y10T 29/4968	. . . . .	Assembling of race, cage, and rolling anti-friction members
Y10T 29/49682	. . . . .	Assembling of race and rolling anti-friction members
Y10T 29/49684	. . . . .	with race making
Y10T 29/49686	. . . . .	Assembling of cage and rolling anti-friction members
Y10T 29/49687	. . . . .	with cage making
Y10T 29/49689	. . . . .	Race making
Y10T 29/49691	. . . . .	Cage making
Y10T 29/49693	. . . . .	Roller making
Y10T 29/49694	. . . . .	Ball making
Y10T 29/49696	. . .	Mounting
Y10T 29/49698	. . .	Demounting
Y10T 29/497	. . .	Pre-usage process, e.g., preloading, aligning
Y10T 29/49702	. . .	Lubricating

Y10T 29/49703	. . .	Sealing
Y10T 29/49705	. . .	Coating or casting
Y10T 29/49707	. . .	Bearing surface treatment
Y10T 29/49709	. . .	Specific metallic composition
Y10T 29/4971	. . .	Nonmetallic bearing element
Y10T 29/49712	. .	Ball making
Y10T 29/49714	. . .	Hollow ball
Y10T 29/49716	. .	Converting
Y10T 29/49718	. .	Repairing
Y10T 29/49719	. . .	Seal or element thereof
Y10T 29/49721	. . .	with disassembling
Y10T 29/49723	. . . .	including reconditioning of part
Y10T 29/49725	. . . . .	by shaping
Y10T 29/49726	. . . . .	Removing material
Y10T 29/49728	. . . . .	and by a metallurgical operation, e.g., welding, diffusion bonding, casting
Y10T 29/4973	. . . .	Replacing of defective part
Y10T 29/49732	. . .	by attaching repair preform, e.g., remaking, restoring, or patching
Y10T 29/49734	. . . .	and removing damaged material
Y10T 29/49735	. . . . .	Mechanically attaching preform with separate fastener
Y10T 29/49737	. . . . .	Metallurgically attaching preform
Y10T 29/49739	. . . .	Mechanically attaching preform by separate fastener
Y10T 29/49741	. . . . .	Screw threaded fastener
Y10T 29/49742	. . . .	Metallurgically attaching preform
Y10T 29/49744	. . . .	Screw threaded preform
Y10T 29/49746	. . .	by applying fluent material, e.g., coating, casting
Y10T 29/49748	. . .	by shaping, e.g., bending, extruding, turning, etc.
Y10T 29/4975	. . . .	including heating
Y10T 29/49751	. .	Scrap recovering or utilizing
Y10T 29/49753	. . .	Metalworking to consolidate scrap
Y10T 29/49755	. . .	Separating one material from another
Y10T 29/49757	. . . .	by burning or heating
Y10T 29/49758	. .	During simulated operation or operating conditions
Y10T 29/4976	. . .	Temperature
Y10T 29/49762	. .	Center locating and shaping
Y10T 29/49764	. .	with testing or indicating
Y10T 29/49766	. . .	torquing threaded assemblage or determining torque herein
Y10T 29/49767	. . . .	Determining relative number of threaded member rotations
Y10T 29/49769	. . .	Using optical instrument [excludes mere human eyeballing]
Y10T 29/49771	. . .	Quantitative measuring or gauging

Y10T 29/49773	. . . . by radioactive tracing
Y10T 29/49774	. . . . by vibratory or oscillatory movement
Y10T 29/49776	. . . . Pressure, force, or weight determining
Y10T 29/49778	. . . with aligning, guiding, or instruction
Y10T 29/4978	. . . . Assisting assembly or disassembly
Y10T 29/49782	. . of a slide fastener
Y10T 29/49783	. . . of slider
Y10T 29/49785	. . . of interlocking element
Y10T 29/49787	. . Obtaining plural composite product pieces from preassembled workpieces
Y10T 29/49789	. . Obtaining plural product pieces from unitary workpiece
Y10T 29/4979	. . . Breaking through weakened portion
Y10T 29/49792	. . . Dividing through modified portion
Y10T 29/49794	. . . Dividing on common outline
Y10T 29/49796	. . . Coacting pieces
Y10T 29/49798	. . . Dividing sequentially from leading end, e.g., by cutting or breaking
Y10T 29/49799	. . Providing transitory integral holding or handling portion
Y10T 29/49801	. . Shaping fiber or fibered material
Y10T 29/49803	. . Magnetically shaping
Y10T 29/49805	. . Shaping by direct application of fluent pressure
Y10T 29/49806	. . . Explosively shaping
Y10T 29/49808	. . Shaping container end to encapsulate material
Y10T 29/4981	. . Utilizing transitory attached element or associated separate material
Y10T 29/49812	. . . Temporary protective coating, impregnation, or cast layer
Y10T 29/49813	. . Shaping mating parts for reassembly in different positions
Y10T 29/49815	. . Disassembling
Y10T 29/49817	. . . with other than ancillary treating or assembling
Y10T 29/49819	. . . with conveying of work or disassembled work part
Y10T 29/49821	. . . by altering or destroying work part or connector
Y10T 29/49822	. . . by applying force
Y10T 29/49824	. . . . to elastically deform work part or connector
Y10T 29/49826	. . Assembling or joining
Y10T 29/49828	. . . Progressively advancing of work assembly station or assembled portion of work
Y10T 29/49829	. . . . Advancing work to successive stations [i.e., assembly line]
Y10T 29/49831	. . . . Advancing station
Y10T 29/49833	. . . Punching, piercing or reaming part by surface of second part
Y10T 29/49835	. . . . with shaping
Y10T 29/49837	. . . . . of first part
Y10T 29/49838	. . . by stringing
Y10T 29/4984	. . . Retaining clearance for motion between assembled parts

Y10T 29/49842	. . . .	Between tube-forming helical coils
Y10T 29/49844	. . . .	Through resilient media
Y10T 29/49845	. . . .	by deforming interlock
Y10T 29/49847	. . . . .	by folding part into plural ears
Y10T 29/49849	. . . . .	by wrapping around
Y10T 29/49851	. . . . .	of link closure
Y10T 29/49853	. . . . .	of sphere, i.e., ball, in socket
Y10T 29/49854	. . . . .	Ball point pen making
Y10T 29/49856	. . . . .	Allowing assembled sphere to move in single plane only
Y10T 29/49858	. . . . .	of flange into tubular socket
Y10T 29/4986	. . . . .	Outwardly deforming internally fitted rod
Y10T 29/49861	. . .	Sizing mating parts during final positional association
Y10T 29/49863	. . .	with prestressing of part
Y10T 29/49865	. . . .	by temperature differential [e.g., shrink fit]
Y10T 29/49867	. . . .	of skin on frame member
Y10T 29/49869	. . . . .	by flexing
Y10T 29/4987	. . . .	Elastic joining of parts
Y10T 29/49872	. . . . .	Confining elastic part in socket
Y10T 29/49874	. . . .	Prestressing rod, filament or strand
Y10T 29/49876	. . . .	by snap fit
Y10T 29/49877	. . .	of flexible wall, expansible chamber devices [e.g., bellows]
Y10T 29/49879	. . .	Spaced wall tube or receptacle
Y10T 29/49881	. . .	of separate helix [e.g., screw thread]
Y10T 29/49883	. . .	Ribbing
Y10T 29/49885	. . .	with coating before or during assembling
Y10T 29/49886	. . . .	to roughen surface
Y10T 29/49888	. . .	Subsequently coating
Y10T 29/4989	. . .	with spreading of cable strands
Y10T 29/49892	. . .	Joining plate edge perpendicularly to frame
Y10T 29/49893	. . .	Peripheral joining of opposed mirror image parts to form a hollow body
Y10T 29/49895	. . .	Associating parts by use of aligning means [e.g., use of a drift pin or a "fixture"]
Y10T 29/49897	. . . .	Registering mating opposed tool parts [e.g., registering a punch and a cooperating die]
Y10T 29/49899	. . . .	by multiple cooperating aligning means
Y10T 29/49901	. . . .	Sequentially associating parts on stationary aligning means
Y10T 29/49902	. . . .	by manipulating aligning means
Y10T 29/49904	. . .	Assembling a subassembly, then assembling with a second subassembly
Y10T 29/49906	. . .	Metal deforming with nonmetallic bonding
Y10T 29/49908	. . .	Joining by deforming

Y10T 29/49909	. . . .	Securing cup or tube between axially extending concentric annuli
Y10T 29/49911	. . . . .	by expanding inner annulus
Y10T 29/49913	. . . . .	by constricting outer annulus
Y10T 29/49915	. . . .	Overedge assembling of seated part
Y10T 29/49917	. . . . .	by necking in cup or tube wall
Y10T 29/49918	. . . . .	. . . . . At cup or tube end
Y10T 29/4992	. . . . .	by flaring inserted cup or tube end
Y10T 29/49922	. . . . .	by bending over projecting prongs
Y10T 29/49924	. . . .	of parallel side-by-side elongated members
Y10T 29/49925	. . . .	Inward deformation of aperture or hollow body wall
Y10T 29/49927	. . . . .	Hollow body is axially joined cup or tube
Y10T 29/49929	. . . . .	. . . . . Joined to rod
Y10T 29/49931	. . . . .	. . . . . Joined to overlapping ends of plural rods
Y10T 29/49933	. . . . .	. . . . . After thinning
Y10T 29/49934	. . . . .	by axially applying force
Y10T 29/49936	. . . .	Surface interlocking
Y10T 29/49938	. . . .	Radially expanding part in cavity, aperture, or hollow body
Y10T 29/4994	. . . . .	Radially expanding internal tube
Y10T 29/49941	. . . . .	Peripheral edge joining of abutting plates
Y10T 29/49943	. . . . .	Riveting
Y10T 29/49945	. . . .	by driven force fit
Y10T 29/49947	. . . .	by applying separate fastener
Y10T 29/49948	. . . . .	Multipart cooperating fastener [e.g., bolt and nut]
Y10T 29/4995	. . . . .	Nonthreaded
Y10T 29/49952	. . . . .	At least one part is nonmetallic
Y10T 29/49954	. . . . .	Fastener deformed after application
Y10T 29/49956	. . . . .	Riveting
Y10T 29/49957	. . . . .	. . . . . At least one part nonmetallic
Y10T 29/49959	. . . . .	Nonresilient fastener
Y10T 29/49961	. . . . .	At least one part nonmetallic
Y10T 29/49963	. . . . .	Threaded fastener
Y10T 29/49964	. . . . .	At least one part nonmetallic
Y10T 29/49966	. . . . .	with supplemental joining
Y10T 29/49968	. . . . .	Metal fusion joining
Y10T 29/4997	. . . . .	At least one part nonmetallic
Y10T 29/49972	. . . .	with separating, localizing, or eliminating of as-cast defects from a metal casting [e.g., anti-pipe]
Y10T 29/49973	. . . .	Compressing ingot while still partially molten
Y10T 29/49975	. . . .	Removing defects
Y10T 29/49977	. . . . .	From center of ingot to leave hollow blank

Y10T 29/49979	. . . . After deforming
Y10T 29/4998	. . Combined manufacture including applying or shaping of fluent material
Y10T 29/49982	. . . Coating
Y10T 29/49984	. . . . and casting
Y10T 29/49986	. . . . Subsequent to metal working
Y10T 29/49988	. . . Metal casting
Y10T 29/49989	. . . . Followed by cutting or removing material
Y10T 29/49991	. . . . Combined with rolling
Y10T 29/49993	. . . Filling of opening
Y10T 29/49995	. . Shaping one-piece blank by removing material
Y10T 29/49996	. . . Successive distinct removal operations
Y10T 29/49998	. . Work holding
Y10T 29/50	. Convertible metal working machine
Y10T 29/505	. . Vise type
Y10T 29/51	. Plural diverse manufacturing apparatus including means for metal shaping or assembling
Y10T 29/5101	. . Slide fastener or slide fastener element
Y10T 29/5102	. . Binding or covering and cutting
Y10T 29/5103	. . . Cutting covering material only
Y10T 29/5104	. . Type of machine
Y10T 29/5105	. . . Drill press
Y10T 29/5107	. . . . Drilling and other
Y10T 29/5108	. . . . Portable
Y10T 29/5109	. . . Lathe
Y10T 29/511	. . . . Grinding attachment
Y10T 29/5111	. . . . Pulley or wheel
Y10T 29/5112	. . . . Convertible
Y10T 29/5113	. . . . Commutator
Y10T 29/5114	. . . . Lathe and tool
Y10T 29/5115	. . . Planer
Y10T 29/5116	. . forging and bending, cutting or punching
Y10T 29/5117	. . . Fastener [zipper]
Y10T 29/5118	. . . Riveting
Y10T 29/512	. . . Ball making
Y10T 29/5121	. . . Wire working
Y10T 29/5122	. . with means to feed work during tool contact
Y10T 29/5123	. . . including nonrotary flying tool
Y10T 29/5124	. . with means to feed work intermittently from one tool station to another
Y10T 29/5125	. . . Stock turret
Y10T 29/5126	. . . . Swiss type

Y10T 29/5127	. . .	Blank turret
Y10T 29/5128	. . . .	Rotary work - vertical axis
Y10T 29/5129	. . . .	Rotary work - horizontal axis
Y10T 29/513	. . . .	Stationary work
Y10T 29/5132	. . . .	Belt drive
Y10T 29/5133	. . . .	Crankshaft
Y10T 29/5134	. . . .	Collapsible tube
Y10T 29/5135	. . .	Endless belt
Y10T 29/5136	. .	Separate tool stations for selective or successive operation on work
Y10T 29/5137	. . .	including assembling or disassembling station
Y10T 29/5138	. . . .	and means to machine work part to fit cooperating work part
Y10T 29/5139	. . . .	and means to sever work prior to disassembling
Y10T 29/514	. . . . .	comprising means to strip insulation from wire
Y10T 29/5141	. . . .	and means to stake electric wire to commutator or armature in assembling of electric motor or generator
Y10T 29/5142	. . . .	and means to sever work from supply
Y10T 29/5143	. . . .	and means to machine product
Y10T 29/5145	. . . . .	to sever product to length
Y10T 29/5146	. .	Common reciprocating support for spaced tools
Y10T 29/5147	. .	including composite tool
Y10T 29/5148	. . .	including severing means
Y10T 29/5149	. . . .	to sever electric terminal from supply strip
Y10T 29/515	. . . .	to trim electric component
Y10T 29/5151	. . . . .	Means comprising hand-manipulatable implement
Y10T 29/5152	. .	with turret mechanism
Y10T 29/5153	. . .	Multiple turret
Y10T 29/5154	. . .	tool turret
Y10T 29/5155	. . . .	Rotary tool holder
Y10T 29/5157	. . . .	Sliding tool holder
Y10T 29/5158	. . . .	Fluid operated
Y10T 29/5159	. . . .	Cam operated
Y10T 29/516	. . . . .	Longitudinal turret axis
Y10T 29/5161	. . . . .	Transverse turret axis
Y10T 29/5162	. . . .	Lever operated
Y10T 29/5163	. . . .	Rack-and-pinion operated
Y10T 29/5164	. . . .	Screw operated
Y10T 29/5165	. . .	including rotating and/or locking means
Y10T 29/5166	. . . .	Frictional and positive
Y10T 29/5167	. . . .	Lock means for tool or work turrets
Y10T 29/5168	. .	Multiple-tool holder

Y10T 29/517	. . . Laterally movable stock holder
Y10T 29/5171	. . . Axial tool and transversely movable slide rest
Y10T 29/5172	. . . . Rotary tool spindle
Y10T 29/5173	. . . Longitudinally and transversely movable
Y10T 29/5174	. . . . Rotary tool spindle
Y10T 29/5175	. . . Oscillating tool
Y10T 29/5176	. . including machining means
Y10T 29/5177	. . . and work-holder for assembly
Y10T 29/5178	. . Attachment
Y10T 29/5179	. . Speed controller
Y10T 29/518	. . Carriage stop mechanism
Y10T 29/5182	. . Flash remover
Y10T 29/5183	. . Welding strip ends
Y10T 29/5184	. . Casting and working
Y10T 29/5185	. . Tube making
Y10T 29/5186	. . Covering
Y10T 29/5187	. . Wire working
Y10T 29/5188	. . Radiator making
Y10T 29/5189	. . Printing plate
Y10T 29/519	. . Turret
Y10T 29/5191	. . Assembly
Y10T 29/5192	. . Armature
Y10T 29/5193	. . Electrical connector or terminal
Y10T 29/5195	. . Tire valve or spark plug
Y10T 29/5196	. . Multiple station with conveyor
Y10T 29/5197	. . Multiple stations working strip material
Y10T 29/5198	. . Continuous strip
Y10T 29/5199	. . Work on tubes
Y10T 29/52	. Plural diverse manufacturing apparatus
Y10T 29/53	. Means to assemble or disassemble
Y10T 29/53004	. . with means to regulate operation by use of templet, tape, card or other replaceable information supply
Y10T 29/53009	. . . with comparator
Y10T 29/53013	. . . . Computer input
Y10T 29/53017	. . . Web or strand-carried information supply
Y10T 29/53022	. . with means to test work or product
Y10T 29/53026	. . with randomly actuated stopping or disabling means
Y10T 29/5303	. . . Responsive to condition of work or product
Y10T 29/53035	. . . Responsive to operative [e.g., safety device, etc.]

Y10T 29/53039	. . with control means energized in response to activator stimulated by condition sensor
Y10T 29/53043	. . . including means to divert defective work part
Y10T 29/53048	. . . Multiple station assembly or disassembly apparatus
Y10T 29/53052	. . . . including position sensor
Y10T 29/53057	. . . Responsive to timer
Y10T 29/53061	. . . Responsive to work or work-related machine element
Y10T 29/53065	. . . . with means to fasten by deformation
Y10T 29/5307	. . . . . Self-piercing work part
Y10T 29/53074	. . . . with means to fasten by elastic joining
Y10T 29/53078	. . . . with means to fasten by frictional fitting
Y10T 29/53083	. . . . including means to apply magnetic force directly to position or hold work
Y10T 29/53087	. . with signal, scale, illuminator, or optical viewer
Y10T 29/53091	. . . for work-holder for assembly or disassembly
Y10T 29/53096	. . including means to provide a controlled environment
Y10T 29/531	. . Nuclear device
Y10T 29/53104	. . Roller or ball bearing
Y10T 29/53109	. . . including deforming means
Y10T 29/53113	. . Heat exchanger
Y10T 29/53117	. . . including means to manipulate heat exchanger tube bundle
Y10T 29/53122	. . . including deforming means
Y10T 29/53126	. . Means to place sheath on running-length core
Y10T 29/5313	. . Means to assemble electrical device
Y10T 29/53135	. . . Storage cell or battery
Y10T 29/53139	. . . . including deforming means
Y10T 29/53143	. . . Motor or generator
Y10T 29/53148	. . . . Means to assemble commutator
Y10T 29/53152	. . . . Means to position insulation
Y10T 29/53157	. . . . Means to stake wire to commutator or armature
Y10T 29/53161	. . . . including deforming means
Y10T 29/53165	. . . Magnetic memory device
Y10T 29/5317	. . . Laminated device
Y10T 29/53174	. . . Means to fasten electrical component to wiring board, base, or substrate
Y10T 29/53178	. . . . Chip component
Y10T 29/53183	. . . . Multilead component
Y10T 29/53187	. . . Multiple station assembly apparatus
Y10T 29/53191	. . . Means to apply vacuum directly to position or hold work part
Y10T 29/53196	. . . Means to apply magnetic force directly to position or hold work part
Y10T 29/532	. . . Conductor

Y10T 29/53204	. . . .	Electrode
Y10T 29/53209	. . . .	Terminal or connector
Y10T 29/53213	. . . . .	Assembled to wire-type conductor
Y10T 29/53217	. . . . .	Means to simultaneously assemble multiple, independent conductors to terminal
Y10T 29/53222	. . . . .	Means comprising hand-manipulatable implement
Y10T 29/53226	. . . . .	Fastening by deformation
Y10T 29/5323	. . . . .	Fastening by elastic joining
Y10T 29/53235	. . . . .	Means to fasten by deformation
Y10T 29/53239	. . . . .	Means to fasten by elastic joining
Y10T 29/53243	. . . .	Multiple, independent conductors
Y10T 29/53248	. . . .	Switch or fuse
Y10T 29/53252	. . .	Means to simultaneously fasten three or more parts
Y10T 29/53257	. . .	Means comprising hand-manipulatable implement
Y10T 29/53261	. . .	Means to align and advance work part
Y10T 29/53265	. . .	with work-holder for assembly
Y10T 29/5327	. . .	Means to fasten by deforming
Y10T 29/53274	. .	Means to disassemble electrical device
Y10T 29/53278	. . .	Storage cell or battery
Y10T 29/53283	. . .	Means comprising hand-manipulatable implement
Y10T 29/53287	. .	Means to place traveler on ring or ring on bobbin of a textile machine
Y10T 29/53291	. .	Slide fastener
Y10T 29/53296	. . .	Means to assemble stop onto stringer
Y10T 29/533	. . .	Means to assemble slider onto stringer
Y10T 29/53304	. . .	Means to assemble teeth onto stringer
Y10T 29/53309	. . .	Disassembly means
Y10T 29/53313	. .	Means to interrelatedly feed plural work parts from plural sources without manual intervention
Y10T 29/53317	. . .	Box or pallet assembly means
Y10T 29/53322	. . .	Means to assemble container
Y10T 29/53326	. . . .	Handle to container
Y10T 29/5333	. . . .	Label to container
Y10T 29/53335	. . . .	Pressurized dispensing container
Y10T 29/53339	. . . .	Hypodermic syringe
Y10T 29/53343	. . . .	including fluid component
Y10T 29/53348	. . .	Running-length work
Y10T 29/53352	. . . .	Means including orbiting running-length work supply
Y10T 29/53357	. . . .	Pipe section
Y10T 29/53361	. . . .	Assembled to article
Y10T 29/53365	. . .	Multiple station assembly apparatus

Y10T 29/5337	. . .	including assembly pallet
Y10T 29/53374	. . .	including turret-type conveyor
Y10T 29/53378	. . .	including converging conveyors
Y10T 29/53383	. . .	and means to fasten work parts together
Y10T 29/53387	. . . .	by deforming
Y10T 29/53391	. . . .	by elastic joining
Y10T 29/53396	. . . .	by friction fit
Y10T 29/534	. .	Multiple station assembly or disassembly apparatus
Y10T 29/53404	. . .	including turret-type conveyor
Y10T 29/53409	. . .	including converging conveyors
Y10T 29/53413	. . . .	and primary central conveyor
Y10T 29/53417	. . .	Means to fasten work parts together
Y10T 29/53422	. . . .	by deforming
Y10T 29/53426	. . . .	by elastic joining
Y10T 29/5343	. .	Means to drive self-piercing work part
Y10T 29/53435	. .	including assembly pallet
Y10T 29/53439	. .	including provision to utilize thermal expansion of work
Y10T 29/53443	. .	Means to assemble or disassemble container and fluid component
Y10T 29/53448	. .	Vehicle wheel
Y10T 29/53452	. . .	Railway wheel
Y10T 29/53457	. .	Tumbler lock
Y10T 29/53461	. .	toy doll
Y10T 29/53465	. .	Film or tape cartridge
Y10T 29/5347	. .	Crystal to watch or clock
Y10T 29/53474	. .	Means to insert or extract pen point
Y10T 29/53478	. .	with magazine supply
Y10T 29/53483	. . .	and magnetic work-holder or positioner
Y10T 29/53487	. . .	Assembling means comprising hand-manipulatable implement
Y10T 29/53491	. . . .	One work part comprising living tissue
Y10T 29/53496	. . . .	comprising driver for snap-off-mandrel fastener; e.g., Pop [TM] riveter
Y10T 29/535	. . . .	One work part comprising nut or screw
Y10T 29/53504	. . . .	One work part comprising paper clip
Y10T 29/53509	. . . .	Means to assemble tire stud into tire tread
Y10T 29/53513	. . . .	Means to fasten by deforming
Y10T 29/53517	. . . .	Fastening sinker to fishing line
Y10T 29/53522	. . .	Means to fasten by deforming
Y10T 29/53526	. .	Running-length work
Y10T 29/5353	. . .	Assembled on core
Y10T 29/53535	. .	including means to vibrate work
Y10T 29/53539	. .	including work conveyor

Y10T 29/53543	. . .	including transporting track
Y10T 29/53548	. . . .	and work carrying vehicle
Y10T 29/53552	. .	Valve applying or removing
Y10T 29/53557	. . .	Engine valve unit puller or applier
Y10T 29/53561	. . .	Engine valve spring compressor [only]
Y10T 29/53565	. . . .	Plural spring engagement
Y10T 29/5357	. . . .	Screw operated
Y10T 29/53574	. . . . .	Parallel or tong type, side entrance
Y10T 29/53578	. . . .	Lever operated
Y10T 29/53583	. . . . .	Single jaw or valve engagement
Y10T 29/53587	. . . . .	Plier type
Y10T 29/53591	. . .	to or from wheel rim of resilient tire or tube
Y10T 29/53596	. . .	Removal tool
Y10T 29/536	. .	Piston ring inserter or remover
Y10T 29/53604	. . .	Plier-type operation
Y10T 29/53609	. . . .	with ring encirclement
Y10T 29/53613	. .	Spring applier or remover
Y10T 29/53617	. . .	Transmission spring
Y10T 29/53622	. . .	Helical spring
Y10T 29/53626	. . .	Flat spiral spring [e.g., watch or clock type]
Y10T 29/5363	. . .	Circular spring
Y10T 29/53635	. . .	Leaf spring
Y10T 29/53639	. .	Means to stake watch or clock
Y10T 29/53643	. . .	Plier type
Y10T 29/53648	. .	Brake lining to brake shoe
Y10T 29/53652	. .	Tube and coextensive core
Y10T 29/53657	. .	to apply or remove a resilient article [e.g., tube, sleeve, etc.]
Y10T 29/53661	. . .	Nipple to nursing bottle
Y10T 29/53665	. . .	Well protector to sucker rod
Y10T 29/5367	. .	Coupling to conduit
Y10T 29/53674	. .	Loose-leaf sheet binder
Y10T 29/53678	. .	Compressing parts together face to face
Y10T 29/53683	. .	Spreading parts apart or separating them from face to face engagement
Y10T 29/53687	. .	by rotation of work part
Y10T 29/53691	. . .	Means to insert or remove helix
Y10T 29/53696	. .	Means to string
Y10T 29/537	. .	tool handle and tool
Y10T 29/53704	. .	tool chuck and tool
Y10T 29/53709	. .	Overedge assembling means
Y10T 29/53713	. . .	Belt-hook attacher

Y10T 29/53717	. . .	Annular work
Y10T 29/53722	. . . .	with radially acting tool inside annular work
Y10T 29/53726	. . . .	with second workpiece inside annular work one workpiece moved to shape the other
Y10T 29/5373	. . . . .	comprising driver for snap-off-mandrel fastener; e.g., Pop [TM] riveter
Y10T 29/53735	. . . . .	including near side fastener shaping tool
Y10T 29/53739	. . . . .	Pneumatic- or fluid-actuated tool
Y10T 29/53743	. . . . .	Liquid
Y10T 29/53748	. . . . .	and gas
Y10T 29/53752	. . . . .	having rotary drive mechanism
Y10T 29/53757	. . . . .	having allochiral actuating handles
Y10T 29/53761	. . . . .	having repositionable annulus engaging tool
Y10T 29/53765	. . . . .	including near side fastener shaping tool
Y10T 29/5377	. . .	Riveter
Y10T 29/53774	. . . .	Single header
Y10T 29/53778	. . . . .	Pipe joiner
Y10T 29/53783	. . .	Clip applier
Y10T 29/53787	. . .	Binding or covering
Y10T 29/53791	. . . .	Edge binding
Y10T 29/53796	. .	Puller or pusher means, contained force multiplying operator
Y10T 29/538	. . .	Hubcap and hub
Y10T 29/53804	. . .	Battery post and terminal
Y10T 29/53809	. . .	Cotter pin and cooperating member
Y10T 29/53813	. . . .	Plier type means
Y10T 29/53817	. . .	Valve stem pin or key and another member
Y10T 29/53822	. . .	Machine key and another member
Y10T 29/53826	. . .	Arbor-type press means
Y10T 29/5383	. . .	having fluid operator
Y10T 29/53835	. . .	having wedge operator
Y10T 29/53839	. . .	having percussion or explosive operator
Y10T 29/53843	. . . .	Tube, sleeve, or ferrule inserting or removing
Y10T 29/53848	. . .	having screw operator
Y10T 29/53852	. . . .	C-frame
Y10T 29/53857	. . . .	Central screw, work-engagers around screw
Y10T 29/53861	. . . . .	Work-engager arms along or parallel to screw
Y10T 29/53865	. . . . .	with arm connecting engaging means
Y10T 29/5387	. . . . .	Pivotal arms
Y10T 29/53874	. . . . .	Pivotal grippers on screw
Y10T 29/53878	. . . . .	Tubular or tube segment forms work-engager

Y10T 29/53883	. . . . .	Screw threaded work-engager
Y10T 29/53887	. . . . .	Movable grippers on screw
Y10T 29/53891	. . . . .	Plate or bar forms work-engager
Y10T 29/53896	. . .	having lever operator
Y10T 29/539	. . . .	Plier type means
Y10T 29/53904	. .	Means comprising piston ring group contractor or holder
Y10T 29/53909	. .	Means comprising hand manipulatable tool
Y10T 29/53913	. . .	Aligner or center
Y10T 29/53917	. . . .	Tube with tube
Y10T 29/53922	. . . .	Auto wheel with auto chassis
Y10T 29/53926	. . . .	Clutch plates
Y10T 29/5393	. . .	Means comprising impact receiving tool
Y10T 29/53935	. . . .	C-frame
Y10T 29/53939	. . . .	Thread protector [e.g., wheel axle type]
Y10T 29/53943	. . .	Hand gripper for direct push or pull
Y10T 29/53948	. . . .	Centrifugal separator
Y10T 29/53952	. . . .	Tube sleeve or ferrule applying or removing
Y10T 29/53957	. . . . .	Thread-tapping grip
Y10T 29/53961	. .	with work-holder for assembly
Y10T 29/53965	. . .	for assembling a luminescent mantle
Y10T 29/5397	. . .	and assembling press [e.g., truss assembling means, etc.]
Y10T 29/53974	. . .	having means to permit support movement while work is thereon
Y10T 29/53978	. .	including means to relatively position plural work parts
Y10T 29/53983	. .	Work-supported apparatus
Y10T 29/53987	. .	Tube, sleeve or ferrule
Y10T 29/53991	. .	Work gripper, anvil, or element
Y10T 29/53996	. .	by deforming
Y10T 29/54	. .	Miscellaneous apparatus

Former US Class 70 series

Y10T 70/00	Locks
Y10T 70/10	. Miscellaneous
Y10T 70/20	. Attack-actuated defeating mechanisms
Y10T 70/25	. . With reset mechanisms
Y10T 70/30	. Hasp
Y10T 70/308	. . Combination lock
Y10T 70/317	. . . Hasp-carried
Y10T 70/325	. . . Keeper-carried
Y10T 70/333	. . Key lock

Y10T 70/342	. . .	Hasp-carried
Y10T 70/35	. . . .	Keeper-encasing
Y10T 70/358	. . . . .	Dead bolt
Y10T 70/367	. . . . .	Latching bolt
Y10T 70/375	. . . . .	Dead bolt
Y10T 70/383	. . . . .	Latching bolt
Y10T 70/392	. . .	Keeper-carried
Y10T 70/40	. .	Portable
Y10T 70/402	. .	Fetters
Y10T 70/404	. . .	Manacles and cuffs
Y10T 70/407	. . . .	Nippers
Y10T 70/409	. . .	Shackles
Y10T 70/411	. .	Clamps
Y10T 70/413	. .	Padlocks
Y10T 70/415	. . .	Combination and/or key-controlled
Y10T 70/417	. . .	Combination-controlled
Y10T 70/42	. . . .	Non-shackle type
Y10T 70/422	. . . .	Rigid shackle
Y10T 70/424	. . . . .	Sliding
Y10T 70/426	. . . . .	Removable
Y10T 70/428	. . . . .	Pivoted
Y10T 70/43	. . . . .	Sliding detent
Y10T 70/433	. . . . .	Swinging detent
Y10T 70/435	. . . .	Flexible shackle
Y10T 70/437	. . .	Key-controlled
Y10T 70/439	. . . .	Non-shackle type
Y10T 70/441	. . . . .	Housing extension and cooperating detent
Y10T 70/443	. . . . .	Single stem or shank
Y10T 70/446	. . . .	Rigid shackle
Y10T 70/448	. . . . .	Divided shackle
Y10T 70/45	. . . . .	Divided jaw type
Y10T 70/452	. . . . .	Sliding
Y10T 70/454	. . . . .	Removable
Y10T 70/457	. . . . .	Arcuate locus
Y10T 70/459	. . . . .	Both legs engaged
Y10T 70/461	. . . . .	Short leg engaged
Y10T 70/463	. . . . .	Long leg engaged
Y10T 70/465	. . . . .	Pivoted
Y10T 70/467	. . . . .	Sliding detent
Y10T 70/47	. . . . .	Free end only engaged

Y10T 70/472	. . . . .	Pivoted end only engaged
Y10T 70/474	. . . . .	Swinging detent
Y10T 70/476	. . . . .	Free end only engaged
Y10T 70/478	. . . . .	Pivoted end only engaged
Y10T 70/48	. . . . .	Arcuate locus
Y10T 70/483	. . . . .	Flexible shackle
Y10T 70/485	. . . . .	With seal
Y10T 70/487	. . . . .	Parts, accessories, attachments and adjuncts
Y10T 70/489	. . . . .	Housings
Y10T 70/491	. . . . .	Shackles
Y10T 70/493	. . . . .	Protectors
Y10T 70/496	. . . . .	Sheaths
Y10T 70/498	. . . . .	Shields or canopies
Y10T 70/50	. . . . .	Special application
Y10T 70/5004	. . . . .	For antitheft signaling device on protected article
Y10T 70/5009	. . . . .	For portable articles
Y10T 70/5013	. . . . .	Canes, umbrellas, apparel
Y10T 70/5018	. . . . .	Robes
Y10T 70/5022	. . . . .	Tools
Y10T 70/5027	. . . . .	Supporting stands
Y10T 70/5031	. . . . .	Receptacle
Y10T 70/5035	. . . . .	Bag
Y10T 70/504	. . . . .	Collapsible throat
Y10T 70/5044	. . . . .	Pivoted rigid jaw
Y10T 70/5049	. . . . .	Attache or briefcase, portfolio
Y10T 70/5053	. . . . .	Interengageable slide fastener type
Y10T 70/5058	. . . . .	Trunk and/or suitcase
Y10T 70/5062	. . . . .	Projecting fixed or movable lug type
Y10T 70/5066	. . . . .	Bolt type
Y10T 70/5071	. . . . .	Hasp controlled
Y10T 70/5075	. . . . .	Link and lever of hasp type
Y10T 70/508	. . . . .	Hasp type
Y10T 70/5084	. . . . .	Hasp-carried lock
Y10T 70/5089	. . . . .	Loop type
Y10T 70/5093	. . . . .	For closures
Y10T 70/5097	. . . . .	Cabinet
Y10T 70/5102	. . . . .	Projecting lug type
Y10T 70/5106	. . . . .	External catch
Y10T 70/5111	. . . . .	Projectable bolt
Y10T 70/5115	. . . . .	Multiple bolts

Y10T 70/5119	. . . . .	Multidirectional displacement
Y10T 70/5124	. . . . .	Swinging and hooked end
Y10T 70/5128	. . . . .	Drawer
Y10T 70/5133	. . . . .	Dead bolt
Y10T 70/5137	. . . . .	Till
Y10T 70/5142	. . . . .	Combination
Y10T 70/5146	. . . . .	Window
Y10T 70/515	. . . . .	Sliding sash
Y10T 70/5155	. . . . .	Door
Y10T 70/5159	. . . . .	Emergency exit
Y10T 70/5164	. . . . .	Links to limit opening
Y10T 70/5168	. . . . .	Braces
Y10T 70/5173	. . . . .	Sliding door
Y10T 70/5177	. . . . .	Extending keeper
Y10T 70/5181	. . . . .	Rigid or fixed
Y10T 70/5186	. . . . .	Extensible
Y10T 70/519	. . . . .	Projecting or extending bolt
Y10T 70/5195	. . . . .	Projectable bolt
Y10T 70/5199	. . . . .	Swinging door
Y10T 70/5204	. . . . .	Interfitting lock housing and keeper
Y10T 70/5208	. . . . .	Multiple dead bolts
Y10T 70/5212	. . . . .	Sliding dead bolt
Y10T 70/5217	. . . . .	Swinging dead bolt
Y10T 70/5221	. . . . .	Locking latch bolt, biased
Y10T 70/5226	. . . . .	Combined dead bolt and latching bolt
Y10T 70/523	. . . . .	Multiple dead bolts
Y10T 70/5235	. . . . .	Multiple latch bolts
Y10T 70/5239	. . . . .	Dead bolt, dogged latch bolt
Y10T 70/5243	. . . . .	Manually dogged latch bolt
Y10T 70/5246	. . . . .	Dead bolts
Y10T 70/5248	. . . . .	Multiple
Y10T 70/5252	. . . . .	Sliding and swinging
Y10T 70/5257	. . . . .	Combination operable only
Y10T 70/5261	. . . . .	Key operable only
Y10T 70/5265	. . . . .	Sliding and rotary
Y10T 70/527	. . . . .	Sliding
Y10T 70/5274	. . . . .	Combination operable only
Y10T 70/5279	. . . . .	Key operable only
Y10T 70/5283	. . . . .	Swinging
Y10T 70/5288	. . . . .	Combination operable only

Y10T 70/5292	. . . . .	Key operable only
Y10T 70/5296	. . . . .	Single
Y10T 70/5301	. . . . .	Sliding and swinging
Y10T 70/5305	. . . . .	Combination operable only
Y10T 70/531	. . . . .	Key operable only
Y10T 70/5314	. . . . .	Sliding and rotary
Y10T 70/5319	. . . . .	Sliding
Y10T 70/5323	. . . . .	Multidirectional displacement
Y10T 70/5327	. . . . .	Keeper interlocking
Y10T 70/5332	. . . . .	Curved
Y10T 70/5336	. . . . .	Combination operable only
Y10T 70/5341	. . . . .	Key operable only
Y10T 70/5345	. . . . .	Swinging
Y10T 70/535	. . . . .	Keeper and housing interlocking
Y10T 70/5354	. . . . .	With hooked end
Y10T 70/5358	. . . . .	Combination operable only
Y10T 70/5363	. . . . .	Key operable only
Y10T 70/5367	. . . . .	Screw
Y10T 70/5372	. . . . .	Locking latch bolts, biased
Y10T 70/5376	. . . . .	Keeper interlocking
Y10T 70/5381	. . . . .	Projectable beyond normal biased position
Y10T 70/5385	. . . . .	Spring projected
Y10T 70/5389	. . . . .	Manually operable
Y10T 70/5394	. . . . .	Directly acting dog for exterior, manual, bolt manipulator
Y10T 70/5398	. . . . .	Related dog for interior, manual, bolt manipulator
Y10T 70/5403	. . . . .	Dog having a dog
Y10T 70/5407	. . . . .	Related dogging means for latch-bolt
Y10T 70/5412	. . . . .	Dog and dog actuator always interconnected
Y10T 70/5416	. . . . .	Exterior manipulator declutched from bolt when dogged
Y10T 70/542	. . . . .	Manual dog-controller concentric with bolt manipulator
Y10T 70/5425	. . . . .	Shiftable rollback serves as dog
Y10T 70/5429	. . . . .	Additional dog-controller key actuated for dogging and undogging
Y10T 70/5434	. . . . .	Dog-controller axially slidable and axially rotatable
Y10T 70/5438	. . . . .	Dog-controller rotatable
Y10T 70/5442	. . . . .	Key-actuated lock releases dog
Y10T 70/5447	. . . . .	Manual bolt-manipulator operation releases dog
Y10T 70/5451	. . . . .	Manual bolt-manipulator operation releases dog
Y10T 70/5456	. . . . .	Interior manual bolt-manipulator serves as dog-controller

Y10T 70/546	. . . . .	For both dogging and undogging
Y10T 70/5465	. . . . .	Manual dog-controller
Y10T 70/5469	. . . . .	With additional lock actuated dog-controller
Y10T 70/5473	. . . . .	Additional dog-controller controls both dogging and undogging
Y10T 70/5478	. . . . .	Accessible at door edge
Y10T 70/5482	. . . . .	Slidable only
Y10T 70/5487	. . . . .	Manual bolt-manipulator is slidable only
Y10T 70/5491	. . . . .	Manual bolt-manipulator is lever
Y10T 70/5496	. . . . .	Freely movable external manipulator
Y10T 70/55	. . . . .	Dogged bolt or connections
Y10T 70/5504	. . . . .	Automatic
Y10T 70/5509	. . . . .	Snub bolt
Y10T 70/5513	. . . . .	By manipulator
Y10T 70/5518	. . . . .	Connections only
Y10T 70/5522	. . . . .	Gravity projected
Y10T 70/5527	. . . . .	Projecting mechanism is lock controlled
Y10T 70/5531	. . . . .	Combination and/or key operable
Y10T 70/5535	. . . . .	Trip release
Y10T 70/554	. . . . .	Cover, lid, cap, encasing shield
Y10T 70/5544	. . . . .	Pivoted
Y10T 70/5549	. . . . .	Cover-carried lock
Y10T 70/5553	. . . . .	Dead bolt
Y10T 70/5558	. . . . .	Latching bolt
Y10T 70/5562	. . . . .	Removable
Y10T 70/5566	. . . . .	External locking devices
Y10T 70/5571	. . . . .	Freely movable when locked
Y10T 70/5575	. . . . .	Directly seating
Y10T 70/558	. . . . .	Cover-carried lock
Y10T 70/5584	. . . . .	Dead bolt
Y10T 70/5589	. . . . .	Latching bolt
Y10T 70/5593	. . . . .	Movably seating
Y10T 70/5597	. . . . .	Cover-carried lock
Y10T 70/5602	. . . . .	Dead bolt
Y10T 70/5606	. . . . .	Latching bolt
Y10T 70/5611	. . . . .	For control and machine elements
Y10T 70/5615	. . . . .	Valve
Y10T 70/5619	. . . . .	Locked stationary
Y10T 70/5624	. . . . .	Externally mounted locking device
Y10T 70/5628	. . . . .	Valve encasing

Y10T 70/5633	. . . . .	Housing-carried lock
Y10T 70/5637	. . . . .	With padlock
Y10T 70/5642	. . .	Rod
Y10T 70/5646	. . .	Rotary shaft
Y10T 70/565	. . . . .	Locked stationary
Y10T 70/5655	. . . . .	Housing-carried lock
Y10T 70/5659	. . . . .	Dead bolt
Y10T 70/5664	. . . . .	Latching bolt
Y10T 70/5668	. . . . .	Shaft-carried lock
Y10T 70/5673	. . . . .	Freely movable when locked
Y10T 70/5677	. . . . .	Shaft-carried clutch
Y10T 70/5681	. . .	Gear
Y10T 70/5686	. . . . .	Planetary
Y10T 70/569	. . .	Lever
Y10T 70/5695	. . . . .	Guide
Y10T 70/5699	. . . . .	Quadrant
Y10T 70/5704	. . . . .	Lever-carried lock
Y10T 70/5708	. . . . .	Fixed lever-receiving keeper
Y10T 70/5712	. . . . .	Lever-carried lock
Y10T 70/5717	. . . . .	Multiple
Y10T 70/5721	. . . . .	Externally mounted locking device
Y10T 70/5726	. . . . .	With padlock
Y10T 70/573	. . . . .	Single
Y10T 70/5735	. . . . .	Externally mounted locking device
Y10T 70/5739	. . . . .	With padlock
Y10T 70/5743	. . . . .	Disconnectable
Y10T 70/5748	. . . . .	Foldable
Y10T 70/5752	. . . . .	Universal mounting
Y10T 70/5757	. . .	Handle, handwheel or knob
Y10T 70/5761	. . . . .	Retractable or flush handle
Y10T 70/5765	. . . . .	Rotary or swinging
Y10T 70/577	. . . . .	Locked stationary
Y10T 70/5774	. . . . .	Externally mounted locking device
Y10T 70/5779	. . . . .	With padlock
Y10T 70/5783	. . . . .	Combination lock
Y10T 70/5788	. . . . .	Push pin or button
Y10T 70/5792	. . . . .	Handle-carried key lock
Y10T 70/5796	. . . . .	Coaxially mounted
Y10T 70/5801	. . . . .	Axially movable bolt
Y10T 70/5805	. . . . .	Freely movable when locked

Y10T 70/581	. . . . .	Combination lock
Y10T 70/5814	. . . . .	Push pin or button
Y10T 70/5819	. . . . .	Handle-carried key lock
Y10T 70/5823	. . . . .	Coaxial clutch connection
Y10T 70/5827	. . . . .	Axially movable clutch
Y10T 70/5832	. . . . .	Lock and handle assembly
Y10T 70/5836	. . . . .	Wheel
Y10T 70/5841	. . . . .	Rotation blocking
Y10T 70/5845	. . . . .	Spoke gap traversing type
Y10T 70/585	. . . . .	Brake type
Y10T 70/5854	. . . . .	Bolt, nut, stud, stud-cap
Y10T 70/5858	. . . . .	Locked stationary
Y10T 70/5863	. . . . .	Freely movable when locked
Y10T 70/5867	. . . . .	Encased
Y10T 70/5872	. . . . .	For cycles
Y10T 70/5876	. . . . .	Anchors
Y10T 70/5881	. . . . .	Stands
Y10T 70/5885	. . . . .	Drive
Y10T 70/5889	. . . . .	For automotive vehicles
Y10T 70/5894	. . . . .	Plural point
Y10T 70/5898	. . . . .	With switch
Y10T 70/5903	. . . . .	Hood
Y10T 70/5907	. . . . .	With switch
Y10T 70/5912	. . . . .	Fuel valve
Y10T 70/5916	. . . . .	With switch
Y10T 70/592	. . . . .	Cap combined
Y10T 70/5925	. . . . .	Transmission
Y10T 70/5929	. . . . .	Cover combined
Y10T 70/5934	. . . . .	Selective-type shift rod, fork or block
Y10T 70/5938	. . . . .	With switch
Y10T 70/5942	. . . . .	Planetary type
Y10T 70/5947	. . . . .	With switch
Y10T 70/5951	. . . . .	With switch
Y10T 70/5956	. . . . .	Steering mechanism with switch
Y10T 70/596	. . . . .	Pilot wheel control or linkage
Y10T 70/5965	. . . . .	Control levers with switch
Y10T 70/5969	. . . . .	Other element with switch
Y10T 70/5973	. . . . .	Remote control
Y10T 70/5978	. . . . .	With switch
Y10T 70/5982	. . . . .	Accessories

Y10T 70/5987	. . . . Spare or mounted wheel or tire
Y10T 70/5991	. . . . . Tire or rim only
Y10T 70/5996	. . For seats
Y10T 70/60	. Systems
Y10T 70/625	. . Operation and control
Y10T 70/65	. . . Central control
Y10T 70/675	. . . Serially operable
Y10T 70/70	. Operating mechanism
Y10T 70/7006	. . Predetermined time interval controlled
Y10T 70/7011	. . . Positively initiated delay interval
Y10T 70/7017	. . . . Interval terminating
Y10T 70/7023	. . . . Repeating interval
Y10T 70/7028	. . . Electric
Y10T 70/7034	. . . Clockwork control
Y10T 70/704	. . . . Continuously operating once initiated
Y10T 70/7045	. . . . . Emergency release
Y10T 70/7051	. . Using a powered device [e.g., motor]
Y10T 70/7057	. . . Permanent magnet
Y10T 70/7062	. . . Electrical type [e.g., solenoid]
Y10T 70/7068	. . . . Actuated after correct combination recognized [e.g., numerical, alphabetical, or magnet[s] pattern]
Y10T 70/7073	. . . . . Including use of a key
Y10T 70/7079	. . . . . Key rotated [e.g., Eurocylinder]
Y10T 70/7085	. . . . . Using a dial having indicia or pointer and indicia
Y10T 70/709	. . . . . Plural interdependent or plural independently operable tumbler sets
Y10T 70/7096	. . . . . With mechanism having rocker arm or linked bars
Y10T 70/7102	. . . . And details of blocking system [e.g., linkage, latch, pawl, spring]
Y10T 70/7107	. . . . And alternately mechanically actuated by a key, dial, etc.
Y10T 70/7113	. . . . Projected and retracted electrically
Y10T 70/7119	. . . . Projected electrically only
Y10T 70/7124	. . . . Retracted electrically only
Y10T 70/713	. . . . Dogging manual operator
Y10T 70/7136	. . . . Key initiated actuation of device
Y10T 70/7141	. . Combination and key
Y10T 70/7147	. . Combination or key
Y10T 70/7153	. . Combination
Y10T 70/7158	. . . Individual blocking elements
Y10T 70/7164	. . . . Selectively operable
Y10T 70/7169	. . . Complex movement or puzzle type

Y10T 70/7175	. . . .	Labyrinthian passage
Y10T 70/7181	. . .	Tumbler type
Y10T 70/7186	. . . .	Plural interdependent sets
Y10T 70/7192	. . . .	Plural independently operable sets
Y10T 70/7198	. . . .	Single tumbler set
Y10T 70/7203	. . . . .	With ball or roller
Y10T 70/7209	. . . . .	Intersect sliding tumblers
Y10T 70/7215	. . . . .	Individually set sliding tumblers
Y10T 70/722	. . . . .	Manually operable
Y10T 70/7226	. . . . .	Associated movable operator
Y10T 70/7232	. . . . .	Removable
Y10T 70/7237	. . . . .	Rotary or swinging tumblers
Y10T 70/7243	. . . . .	Intersect tumblers
Y10T 70/7249	. . . . .	Tumblers released
Y10T 70/7254	. . . . .	Fence held spaced from tumblers
Y10T 70/726	. . . . .	Individually set
Y10T 70/7266	. . . . .	Movable selector
Y10T 70/7271	. . . . .	Associated movable operator
Y10T 70/7277	. . . . .	Removable
Y10T 70/7282	. . . . .	Pin or rod and slot
Y10T 70/7288	. . . . .	Spindle operator
Y10T 70/7294	. . . . .	Concentric spindles
Y10T 70/7299	. . . . .	Axially shiftable spindle
Y10T 70/7305	. . . . .	Manually operable
Y10T 70/7311	. . .	Step-by-step
Y10T 70/7316	. . .	Combination upsetting
Y10T 70/7322	. . .	Permutation
Y10T 70/7328	. . . .	Compound tumblers
Y10T 70/7333	. . . . .	With fastener or holder
Y10T 70/7339	. . . . .	Pin and socket
Y10T 70/7345	. . . .	Removable change element
Y10T 70/735	. . .	Operating elements
Y10T 70/7356	. . . .	Fences
Y10T 70/7362	. . . . .	Bolt or lock housing supported
Y10T 70/7367	. . . .	Tumbler structure and position
Y10T 70/7373	. . . . .	Nested
Y10T 70/7379	. . . . .	Variant diameter
Y10T 70/7384	. . . . .	Mounts
Y10T 70/739	. . . . .	Motion-restraining means
Y10T 70/7395	. . . . .	Friction holder

Y10T 70/7401	. . . .	Spindles
Y10T 70/7407	. . . .	Operating indicators
Y10T 70/7412	. . . . .	Portable combination setting guide
Y10T 70/7418	. . . . .	Dials
Y10T 70/7424	. . . .	Tampering prevention or attach defeating
Y10T 70/7429	. . . .	Resonance type
Y10T 70/7435	. . . .	Hidden or covered dial
Y10T 70/7441	. .	Key
Y10T 70/7446	. . .	Multiple keys
Y10T 70/7452	. . . .	Selective shutout type
Y10T 70/7458	. . . .	Interdependent
Y10T 70/7463	. . . .	Master- and change-key
Y10T 70/7469	. . . . .	Change-key shutout
Y10T 70/7475	. . . . .	Submaster- and change-key
Y10T 70/748	. . . . .	Change-key shutout
Y10T 70/7486	. . .	Single key
Y10T 70/7492	. . . .	Tumblerless push or pull key
Y10T 70/7497	. . . .	Tumblerless warded
Y10T 70/7503	. . . .	Tumbler and ward type
Y10T 70/7508	. . . .	Tumbler type
Y10T 70/7514	. . . . .	Sliding and rotary or swinging tumblers
Y10T 70/752	. . . . .	Sliding tumblers
Y10T 70/7525	. . . . .	Longitudinal
Y10T 70/7531	. . . . .	Transverse
Y10T 70/7537	. . . . .	Rotary or swinging tumblers
Y10T 70/7542	. . . . .	Single set
Y10T 70/7548	. . . . .	Directly key engaged
Y10T 70/7554	. . . . .	Cylinder type with auxiliary tumblers or wards
Y10T 70/7559	. . . . .	Cylinder type
Y10T 70/7565	. . . . .	Plural tumbler sets
Y10T 70/7571	. . . . .	Concentric tumblers
Y10T 70/7576	. . . . .	Sliding and rotary plug
Y10T 70/7582	. . . . .	Sliding plug
Y10T 70/7588	. . . . .	Rotary plug
Y10T 70/7593	. . . . .	Sliding tumblers
Y10T 70/7599	. . . . .	Transverse of plug
Y10T 70/7605	. . . . .	Pin tumblers
Y10T 70/761	. . . . .	Rotatable pins [e.g., MEDECO lock]
Y10T 70/7616	. . . . .	Including sidebar
Y10T 70/7621	. . . . .	Including sidebar

Y10T 70/7627	. . . . .	Rotary or swinging tumblers
Y10T 70/7633	. . . . .	Transverse of plug
Y10T 70/7638	. . . . .	Cylinder and plug assembly
Y10T 70/7644	. . . . .	Key- and tool-controlled
Y10T 70/765	. . . . .	Key only controlled
Y10T 70/7655	. . . . .	Cylinder attaching or mounting means
Y10T 70/7661	. . . . .	Detachable or removable cylinder
Y10T 70/7667	. . . . .	Operating elements, parts and adjuncts
Y10T 70/7672	. . . . .	Cylinder
Y10T 70/7678	. . . . .	Adjustable
Y10T 70/7684	. . . . .	Plug
Y10T 70/7689	. . . . .	Tumblers
Y10T 70/7695	. . . . .	Plate
Y10T 70/7701	. . . . .	Pin
Y10T 70/7706	. . . . .	Operating connections
Y10T 70/7712	. . . . .	Rollbacks
Y10T 70/7718	. . . . .	Intermediate
Y10T 70/7723	. . . . .	Cylinder rings
Y10T 70/7729	. . .	Permutation
Y10T 70/7734	. . . .	Automatically key set combinations
Y10T 70/774	. . . .	Adjustable tumblers
Y10T 70/7746	. . . .	Removable change element
Y10T 70/7751	. . .	With ball or roller
Y10T 70/7757	. . .	Push or pull key operation
Y10T 70/7763	. . .	Key ejecting
Y10T 70/7768	. . .	Key-removal preventing
Y10T 70/7774	. . .	False or picking key trapping
Y10T 70/778	. . .	Operating elements
Y10T 70/7785	. . . .	Tumblers
Y10T 70/7791	. . . .	Keys
Y10T 70/7797	. . . .	Picking
Y10T 70/7802	. . . .	Multi-part structures
Y10T 70/7808	. . . . .	With foldable shank or stem
Y10T 70/7814	. . . . .	With extensible shank or stem
Y10T 70/7819	. . . . .	With slidable bit portion
Y10T 70/7825	. . . . .	With pivoted or swinging bit portion
Y10T 70/7831	. . . . .	Nested second key
Y10T 70/7836	. . . . .	Plural shanks, stems or bit wings
Y10T 70/7842	. . . . .	Single shank or stem
Y10T 70/7847	. . . . .	Round rigid

Y10T 70/7853	. . . . .	Tubular
Y10T 70/7859	. . . . .	Flat rigid
Y10T 70/7864	. . . . .	Cylinder lock type
Y10T 70/787	. . . . .	Irregular nonplanar or undulated
Y10T 70/7876	. . . . .	Bow or head
Y10T 70/7881	. . . . .	Bitting
Y10T 70/7887	. . . . .	Frangible
Y10T 70/7893	. . . . .	Permutation
Y10T 70/7898	. . . . .	Threaded
Y10T 70/7904	. . . . .	Magnetic features
Y10T 70/791	. . . . .	Ejecting feature
Y10T 70/7915	. . . . .	Tampering prevention or attack defeating
Y10T 70/7921	. . . . .	Armoring
Y10T 70/7927	. . . . .	Anti-jimmy
Y10T 70/7932	. . . . .	Anti-pick
Y10T 70/7938	. . . . .	Guard ward
Y10T 70/7944	. . . . .	Guard tumbler
Y10T 70/7949	. . . . .	Yielding or frangible connections
Y10T 70/7955	. . . . .	Keyhole guards
Y10T 70/796	. . . . .	Portable
Y10T 70/7966	. . . . .	Combination-controlled
Y10T 70/7972	. . . . .	Portable
Y10T 70/7977	. . . . .	Key-controlled
Y10T 70/7983	. . . . .	Portable
Y10T 70/7989	. . . . .	Key securers, fasteners or retainers
Y10T 70/7994	. . . . .	Portable
Y10T 70/80	. . . . .	Parts, attachments, accessories and adjuncts
Y10T 70/8027	. . . . .	Condition indicators
Y10T 70/8054	. . . . .	With recorder
Y10T 70/8081	. . . . .	Electric
Y10T 70/8108	. . . . .	Padlock
Y10T 70/8135	. . . . .	With register
Y10T 70/8162	. . . . .	Padlock
Y10T 70/8189	. . . . .	Contactual feeler
Y10T 70/8216	. . . . .	Tampering detector
Y10T 70/8243	. . . . .	With seal
Y10T 70/827	. . . . .	Attention-directing
Y10T 70/8297	. . . . .	For combination-operated mechanism
Y10T 70/8324	. . . . .	Housings
Y10T 70/8351	. . . . .	Operating attachments

Y10T 70/8378	. . .	Knobs, hand grips, etc.
Y10T 70/8405	. . .	Combination finders
Y10T 70/8432	. .	For key-operated mechanism
Y10T 70/8459	. . .	Housings
Y10T 70/8486	. . . .	Cylindrical
Y10T 70/8514	. . . .	Face plate
Y10T 70/8541	. . . .	Mounting arrangements
Y10T 70/8568	. . .	Escutcheons
Y10T 70/8595	. . .	Key guides, internal
Y10T 70/8622	. . .	Key insertion guides
Y10T 70/8649	. . .	Keyhole covers
Y10T 70/8676	. . .	Key holders
Y10T 70/8703	. . . .	Flexible
Y10T 70/873	. . . .	One-piece
Y10T 70/8757	. . . .	Releasable catches
Y10T 70/8784	. . . .	Parallel key loops, coaxially mounted, individually movable
Y10T 70/8811	. . .	Key identification
Y10T 70/8838	. .	Adjustment provisions
Y10T 70/8865	. .	Reversible structures
Y10T 70/8892	. .	Silencers or mufflers
Y10T 70/8919	. .	Antifriction provisions
Y10T 70/8946	. .	Emergency unlocking or release arrangements
Y10T 70/8973	. .	Mounting aids, guides and assistors

Former US Class 74 Series

Y10T 74/00	Machine element or mechanism
Y10T 74/10	. High frequency vibratory devices
Y10T 74/11	. Tripping mechanism
Y10T 74/111	. . Speed controlled
Y10T 74/113	. . . Valve gear trips [e.g., steam engine "Corliss" type]
Y10T 74/114	. . Retarded
Y10T 74/115	. . . Plural, sequential, trip actuations
Y10T 74/116	. . . Clock train
Y10T 74/118	. . . . Winding knob trip [e.g., alarm mechanism]
Y10T 74/119	. . Hit and miss
Y10T 74/12	. Gyroscopes
Y10T 74/1204	. . with caging or parking means
Y10T 74/1207	. . . Rotor spin and cage release type
Y10T 74/1211	. . . and resetting means

Y10T 74/1214	. . with gimbal lock preventing means
Y10T 74/1218	. . Combined
Y10T 74/1221	. . Multiple gyroscopes
Y10T 74/1225	. . . with rotor drives
Y10T 74/1229	. . Gyroscope control
Y10T 74/1232	. . . Erecting
Y10T 74/1236	. . . . by plural diverse forces
Y10T 74/1239	. . . . by jet
Y10T 74/1243	. . . . by weight
Y10T 74/1246	. . . . by friction
Y10T 74/125	. . . . by magnetic field
Y10T 74/1254	. . . . by motor torque
Y10T 74/1257	. . . Damping
Y10T 74/1261	. . with pick off
Y10T 74/1264	. . . Optical
Y10T 74/1268	. . . Pneumatic
Y10T 74/1271	. . . Conducting liquid
Y10T 74/1275	. . . Electrical
Y10T 74/1279	. . . Electrical and magnetic
Y10T 74/1282	. . with rotor drive
Y10T 74/1286	. . Vertical gyroscopes
Y10T 74/1289	. . Horizontal gyroscopes
Y10T 74/1293	. . Flexure hinges for gyros
Y10T 74/1296	. . Flywheel structure
Y10T 74/13	. Machine starters
Y10T 74/131	. . Automatic
Y10T 74/132	. . . Separate power mesher
Y10T 74/133	. . . Holders
Y10T 74/134	. . . Clutch connection
Y10T 74/136	. . . Worm and wheel
Y10T 74/137	. . . Reduction gearing
Y10T 74/138	. . Radial meshing
Y10T 74/139	. . Cam operated
Y10T 74/14	. Rotary member or shaft indexing, e.g., tool or work turret
Y10T 74/1406	. . with safety device or drive disconnect
Y10T 74/1412	. . with locating point adjusting
Y10T 74/1418	. . Preselected indexed position
Y10T 74/1424	. . . Sequential
Y10T 74/1429	. . . . Skip position
Y10T 74/1435	. . . . Held by torque

Y10T 74/1441	. . . . Geneva or mutilated gear drive
Y10T 74/1447	. . . . Velocity control
Y10T 74/1453	. . . . Interlocked rotator and brake
Y10T 74/1459	. . . . . Diverse-type brakes
Y10T 74/1465	. . . . . with axially acting friction brake
Y10T 74/1471	. . Plural operators or input drives
Y10T 74/1476	. . with means to axially shift shaft
Y10T 74/1482	. . Single revolution input effects desired fractional output
Y10T 74/1488	. . Control means
Y10T 74/1494	. . Locking means
Y10T 74/15	. Intermittent grip type mechanical movement
Y10T 74/1502	. . Escapement
Y10T 74/1503	. . Rotary to intermittent unidirectional motion
Y10T 74/1505	. . . Automatically controlled
Y10T 74/1506	. . . . Speed
Y10T 74/1508	. . . Rotary crank or eccentric drive
Y10T 74/151	. . . . Adjustable
Y10T 74/1511	. . . . Lever transmitter
Y10T 74/1513	. . . . . Adjustable leverage
Y10T 74/1515	. . . . Rack and pinion transmitter
Y10T 74/1516	. . . . . Adjustable throw
Y10T 74/1518	. . . . Rotary cam drive
Y10T 74/1519	. . . . . Adjustable throw
Y10T 74/1521	. . . . . Radial cam
Y10T 74/1523	. . . . . Radial cam
Y10T 74/1524	. . . Intermittently engaged clutch
Y10T 74/1526	. . Oscillation or reciprocation to intermittent unidirectional motion
Y10T 74/1527	. . . Screw and nut devices
Y10T 74/1529	. . . Slide actuator
Y10T 74/1531	. . . . Multiple acting
Y10T 74/1532	. . . Rack actuator
Y10T 74/1534	. . . . Multiple acting
Y10T 74/1535	. . . . . Inwardly facing racks
Y10T 74/1537	. . . . Oscillating
Y10T 74/1539	. . . . . Multiple acting
Y10T 74/154	. . . . . Inwardly facing racks
Y10T 74/1542	. . . Strap actuator
Y10T 74/1544	. . . . Multiple acting
Y10T 74/1545	. . . . . Spring or weight return
Y10T 74/1547	. . . . Single acting

Y10T 74/1548	. . . . .	Engine starter type
Y10T 74/155	. . . . .	Spring or weight return
Y10T 74/1552	. . . . .	Spring or weight return
Y10T 74/1553	. . .	Lever actuator
Y10T 74/1555	. . . .	Rotary driven element
Y10T 74/1556	. . . . .	Multiple acting
Y10T 74/1558	. .	Grip units and features
Y10T 74/156	. . .	Compound movement handle
Y10T 74/1561	. . . .	Reversible
Y10T 74/1563	. . . .	Transverse pivots
Y10T 74/1565	. . .	Gripper releasing devices
Y10T 74/1566	. . . .	Power pawl lifter
Y10T 74/1568	. . . . .	Automatic
Y10T 74/1569	. . . . .	Idle stroke
Y10T 74/1571	. . . . .	Cooperating holding pawl
Y10T 74/1573	. . . . .	Power stroke
Y10T 74/1574	. . . . .	Cooperating holding pawl
Y10T 74/1576	. . . .	Holding pawl lifter
Y10T 74/1577	. . .	Gripper mountings, lever
Y10T 74/1579	. . . .	Reversible
Y10T 74/1581	. . . .	Multiple acting
Y10T 74/1582	. . . . .	Single ratchet or clutch
Y10T 74/1584	. . .	Gripper mountings, slide
Y10T 74/1585	. . . .	Multiple acting
Y10T 74/1587	. . .	Grip features
Y10T 74/1589	. . . .	Driving band
Y10T 74/159	. . . . .	Clamping
Y10T 74/1592	. . . .	Driven band and gripper
Y10T 74/1594	. . . . .	Positive grip
Y10T 74/1595	. . . .	Driving ratchet-bar or rack
Y10T 74/1597	. . . . .	Multiple acting
Y10T 74/1598	. . . .	Driven ratchet-bar and power dog
Y10T 74/16	. . . . .	Alternating-motion driven device with means during operation to adjust stroke
Y10T 74/1608	. .	Constant length stroke with means to displace end limits
Y10T 74/1616	. . .	Cyclical displacement responsive to the alternating-motion
Y10T 74/1625	. .	Stroke adjustable to zero and/or reversible in phasing
Y10T 74/1633	. . .	Plural driving means to jointly drive the driven device
Y10T 74/1642	. . .	Device driven from selected points on oscillating link
Y10T 74/165	. . .	Driving lever with adjustable pivot point
Y10T 74/1658	. . .	Eccentric and strap drive, shiftable eccentric

Y10T 74/1667	. . . . Changing the extent of eccentricity
Y10T 74/1675	. . . Crank pin drive, shiftable pin
Y10T 74/1683	. . . Cam and follower drive
Y10T 74/1692	. . . . Axial-type cam [e.g., wabblers type]
Y10T 74/17	. Rotary driven device adjustable during operation relative to its supporting structure
Y10T 74/173	. . Screw and nut adjusting means
Y10T 74/177	. . Rack and pinion adjusting means
Y10T 74/18	. Mechanical movements
Y10T 74/18008	. . Oscillating to reciprocating and alternating rotary
Y10T 74/18016	. . Oscillating to reciprocating and intermittent rotary
Y10T 74/18024	. . Rotary to reciprocating and rotary
Y10T 74/18032	. . . Rotary to reciprocating or rotary
Y10T 74/1804	. . Rotary to reciprocating and alternating rotary
Y10T 74/18048	. . Rotary to reciprocating and intermittent rotary
Y10T 74/18056	. . Rotary to or from reciprocating or oscillating
Y10T 74/18064	. . . Head motions
Y10T 74/18072	. . . Reciprocating carriage motions
Y10T 74/1808	. . . . Phonograph type
Y10T 74/18088	. . . Rack and pinion type
Y10T 74/18096	. . . . Shifting rack
Y10T 74/18104	. . . . Shiftable pinion
Y10T 74/18112	. . . . Segmental pinion
Y10T 74/1812	. . . . Alternately rotated pinion
Y10T 74/18128	. . . . Clutchable gears
Y10T 74/18136	. . . . . Bevel
Y10T 74/18144	. . . Overcoming dead center
Y10T 74/18152	. . . Belt or chain carried member
Y10T 74/1816	. . . Crank, lever, toggle, and slide
Y10T 74/18168	. . . Crank, lazy-tong, and slide
Y10T 74/18176	. . . Crank, pitman, lever, and slide
Y10T 74/18182	. . . . Pump jack type
Y10T 74/18184	. . . Crank, pitman, and lever
Y10T 74/182	. . . . Multiple levers
Y10T 74/18208	. . . Crank, pitman, and slide
Y10T 74/18216	. . . Crank, lever, and slide
Y10T 74/18224	. . . . Rack connections
Y10T 74/18232	. . . Crank and lever
Y10T 74/1824	. . . . Slidable connections
Y10T 74/18248	. . . Crank and slide

Y10T 74/18256	. . . .	Slidable connections [e.g., scotch yoke]
Y10T 74/18264	. . .	Crank and multiple pitmans
Y10T 74/18272	. . .	Planetary gearing and slide
Y10T 74/1828	. . .	Cam, lever, and slide
Y10T 74/18288	. . .	Cam and lever
Y10T 74/18296	. . .	Cam and slide
Y10T 74/18304	. . . .	Axial cam
Y10T 74/18312	. . . . .	Grooved
Y10T 74/1832	. . . . .	Multiple screw
Y10T 74/18328	. . . . .	Alternately rotated screw
Y10T 74/18336	. . . .	Wabblers type
Y10T 74/18344	. . .	Unbalanced weights
Y10T 74/18352	. . .	Trammel-pitman
Y10T 74/1836	. .	Rotary to rotary
Y10T 74/18368	. . .	Inertia or centrifugal transmitters
Y10T 74/18376	. . .	Crank, pitman, lever, and crank
Y10T 74/18384	. . .	Crank, lever, and crank
Y10T 74/18392	. . .	Crank, pitman, and crank
Y10T 74/184	. . .	Cranks, link connected
Y10T 74/18408	. . .	Cranks, slidable connections
Y10T 74/18416	. .	Rotary to alternating rotary
Y10T 74/18424	. . .	Mangle connections
Y10T 74/18432	. . . .	Shiftable driven gear
Y10T 74/1844	. . . . .	Central teeth
Y10T 74/18448	. . . .	Mutilated gearing connections
Y10T 74/18456	. . .	Crank, pitman, and lever
Y10T 74/18464	. . .	Reciprocating rack connections
Y10T 74/18472	. . . .	Crank and pitman actuator
Y10T 74/1848	. . . .	Simple crank actuator
Y10T 74/18488	. . .	Oscillating rack connections
Y10T 74/18496	. . . .	Mangle actuated
Y10T 74/18504	. . . .	Crank and pitman actuator
Y10T 74/18512	. . .	Flexible connector type
Y10T 74/1852	. . .	Associated inertia devices
Y10T 74/18528	. .	Rotary to intermittent unidirectional motion
Y10T 74/18536	. . .	Space machines
Y10T 74/18544	. .	Rotary to gyratory
Y10T 74/18552	. . .	Unbalanced weight
Y10T 74/1856	. .	Reciprocating or oscillating to intermittent unidirectional motion
Y10T 74/18568	. .	Reciprocating or oscillating to or from alternating rotary

Y10T 74/18576	. . .	including screw and nut
Y10T 74/18584	. . . .	Shaft shorter than nut
Y10T 74/18592	. . . .	Auxiliary drive [e.g., fluid piston, etc.] for load
Y10T 74/186	. . . .	Alternate power path operable on failure of primary
Y10T 74/18608	. . . .	Single input split into two intermediate outputs that are subsequently superposed into a single output
Y10T 74/18616	. . . .	Single input, plural outputs
Y10T 74/18624	. . . .	Plural inputs, single output
Y10T 74/18632	. . . . .	Plural nuts driving shaft
Y10T 74/1864	. . . . .	Shaft and nut driven
Y10T 74/18648	. . . .	Carriage surrounding, guided by, and primarily supported by member other than screw [e.g., linear guide, etc.]
Y10T 74/18656	. . . .	Carriage surrounded, guided, and primarily supported by member other than screw [e.g., linear guide, etc.]
Y10T 74/18664	. . . .	Shaft moves through rotary drive means
Y10T 74/18672	. . . .	Plural screws in series [e.g., telescoping, etc.]
Y10T 74/1868	. . . .	Deflection related
Y10T 74/18688	. . . .	Limit stop
Y10T 74/18696	. . . .	including means to selectively transmit power [e.g., clutch, etc.]
Y10T 74/18704	. . . .	Means to selectively lock or retard screw or nut
Y10T 74/18712	. . . .	Contamination related
Y10T 74/1872	. . . . .	Imperforate enclosure
Y10T 74/18728	. . . .	Backlash
Y10T 74/18736	. . . .	Pressurized fluid introduced between nut and screw
Y10T 74/18744	. . . .	Lubrication
Y10T 74/18752	. . . .	Manually driven
Y10T 74/1876	. . .	including inertia device
Y10T 74/18768	. . . .	with rack and pinion
Y10T 74/18776	. . . . .	Rectilinear rack
Y10T 74/18784	. . .	including bevel gears
Y10T 74/18792	. . .	including worm
Y10T 74/188	. . .	including spur gear
Y10T 74/18808	. . . .	with rack
Y10T 74/18816	. . . . .	Curvilinear rack
Y10T 74/18824	. . . . .	with biasing means
Y10T 74/18832	. . .	including flexible drive connector [e.g., belt, chain, strand, etc.]
Y10T 74/1884	. . . .	with sprocket wheel
Y10T 74/18848	. . . .	with pulley
Y10T 74/18856	. .	Oscillating to oscillating
Y10T 74/18864	. . .	Snap action
Y10T 74/18872	. . . .	Plate spring

Y10T 74/1888	. . . Geared connections
Y10T 74/18888	. . Reciprocating to or from oscillating
Y10T 74/18896	. . . Snap action
Y10T 74/18904	. . . . Plate spring
Y10T 74/18912	. . . Compound lever and slide
Y10T 74/1892	. . . Lever and slide
Y10T 74/18928	. . . . Straight line motions
Y10T 74/18936	. . . . Slidable connections
Y10T 74/18944	. . . . Link connections
Y10T 74/18952	. . . . toggle transmissions
Y10T 74/1896	. . . . Cam connections
Y10T 74/18968	. . . . Flexible connections
Y10T 74/18976	. . . Rack and pinion
Y10T 74/18984	. . . Inclined ramp
Y10T 74/18992	. . Reciprocating to reciprocating
Y10T 74/19	. Gearing
Y10T 74/19005	. . Nonplanetary gearing differential type [e.g., gearless differentials]
Y10T 74/19009	. . Single gearing unit includes fluid drive
Y10T 74/19014	. . Plural prime movers selectively coupled to common output
Y10T 74/19019	. . Plural power paths from prime mover
Y10T 74/19023	. . Plural power paths to and/or from gearing
Y10T 74/19028	. . . Alternate input connections single hand crank
Y10T 74/19033	. . . Fluid drive divides or combines alternate paths
Y10T 74/19037	. . . One path includes fluid drive
Y10T 74/19042	. . . Friction-type gearing
Y10T 74/19047	. . . Worm-type gearing
Y10T 74/19051	. . . Single driven plural drives
Y10T 74/19056	. . . . Parallel
Y10T 74/1906	. . . . Nonparallel
Y10T 74/19065	. . . . Aligned
Y10T 74/1907	. . . . Parallel and aligned
Y10T 74/19074	. . . Single drive plural driven
Y10T 74/19079	. . . . Parallel
Y10T 74/19084	. . . . . Spur
Y10T 74/19088	. . . . . Bevel
Y10T 74/19093	. . . . . Spur and bevel
Y10T 74/19098	. . . . . Helical
Y10T 74/19102	. . . . . Belt or chain
Y10T 74/19107	. . . . Nonparallel
Y10T 74/19112	. . . . Aligned

Y10T 74/19116	. . . . . Vehicle
Y10T 74/19121	. . . . . Concentric
Y10T 74/19126	. . . Plural drivers plural driven
Y10T 74/1913	. . . . . Bevel
Y10T 74/19135	. . . . . Spur
Y10T 74/1914	. . . Alternate drivers and driven
Y10T 74/19144	. . . Miscellaneous [plural power paths]
Y10T 74/19149	. . with fluid drive
Y10T 74/19153	. . . Condition responsive control
Y10T 74/19158	. . . with one or more controllers for gearing, fluid drive, or clutch
Y10T 74/19163	. . . . with interrelated controls
Y10T 74/19167	. . In series plural interchangeably locked nonplanetary units
Y10T 74/19172	. . Reversal of direction of power flow changes power transmission to alternate path
Y10T 74/19177	. . . Input and output exchange functions
Y10T 74/19181	. . toothed gear and recirculated unconnected elements
Y10T 74/19186	. . Alternating rotary or continuous
Y10T 74/19191	. . Alternating rotary
Y10T 74/19195	. . . Progressive
Y10T 74/192	. . . Shiftable and/or slidable gears
Y10T 74/19205	. . . Clutchable gears
Y10T 74/1921	. . . . On single driven member
Y10T 74/19214	. . . . On single driving member
Y10T 74/19219	. . Interchangeably locked
Y10T 74/19223	. . . Disconnectable counter shaft
Y10T 74/19228	. . . Multiple concentric clutch shafts
Y10T 74/19233	. . . Plurality of counter shafts
Y10T 74/19237	. . . Internal-external gears
Y10T 74/19242	. . . Combined gear and clutch
Y10T 74/19247	. . . . Preselector
Y10T 74/19251	. . . Control mechanism
Y10T 74/19256	. . . . Automatic
Y10T 74/1926	. . . . . Speed responsive
Y10T 74/19265	. . . . . Governor
Y10T 74/1927	. . . . . with belt gearing
Y10T 74/19274	. . . . . torque responsive
Y10T 74/19279	. . . . Cam operated
Y10T 74/19284	. . . Meshing assisters
Y10T 74/19288	. . . . Double clutch and interposed transmission
Y10T 74/19293	. . . Longitudinally slidable

Y10T 74/19298	. . . .	Multiple spur gears
Y10T 74/19302	. . . . .	with tumbler gear
Y10T 74/19307	. . . . .	Selective
Y10T 74/19312	. . . . .	Direct clutch and drive
Y10T 74/19316	. . . . .	Progressive
Y10T 74/19321	. . . . .	Direct clutch and drive
Y10T 74/19326	. . . . .	Fluid operated
Y10T 74/1933	. . . . .	Multiple bevel gears
Y10T 74/19335	. . . . .	Single spur gear
Y10T 74/1934	. . . . .	Tumbler and cone
Y10T 74/19344	. . . . .	Multiple cone
Y10T 74/19349	. . . . .	Single bevel gear
Y10T 74/19353	. . . . .	Pin or crown gears
Y10T 74/19358	. . . .	Laterally slidable gears
Y10T 74/19363	. . . . .	Rotary carriage
Y10T 74/19367	. . . . .	Swinging carriage
Y10T 74/19372	. . . .	Single forward and reverse speeds
Y10T 74/19377	. . . .	Slidable keys or clutches
Y10T 74/19381	. . . . .	Alternative clutch shaft
Y10T 74/19386	. . . . .	Multiple clutch shafts
Y10T 74/19391	. . . . .	Progressive
Y10T 74/19395	. . . . .	Keys simultaneously slidable
Y10T 74/194	. . . . .	Selective
Y10T 74/19405	. . . . .	Multiple forward and reverse
Y10T 74/19409	. . . . .	Single forward and reverse
Y10T 74/19414	. . . . .	Single clutch shaft
Y10T 74/19419	. . . . .	Progressive
Y10T 74/19423	. . . . .	Multiple key
Y10T 74/19428	. . . . .	Spur
Y10T 74/19433	. . . . .	Fluid operated
Y10T 74/19437	. . . . .	Electrically operated
Y10T 74/19442	. . . . .	Single key
Y10T 74/19447	. . . . .	Clutch and ratchet
Y10T 74/19451	. . . . .	Spur gears
Y10T 74/19456	. . . . .	Intermediate clutch
Y10T 74/1946	. . . . .	Sliding clutch carrier
Y10T 74/19465	. . . . .	Sliding clutch operator
Y10T 74/1947	. . . . .	Selective
Y10T 74/19474	. . . . .	Multiple key
Y10T 74/19479	. . . . .	Spur gears

Y10T 74/19484	. . . . .	Single speed forward and reverse
Y10T 74/19488	. . . . .	Spur gears
Y10T 74/19493	. . . . .	Bevel gears
Y10T 74/19498	. . . . .	Bevel and idler gears
Y10T 74/19502	. .	Pivotally supported
Y10T 74/19507	. . .	Windmill turntable
Y10T 74/19512	. . .	Screw
Y10T 74/19516	. . .	Spur
Y10T 74/19521	. . .	Bevel
Y10T 74/19526	. . . .	Wheel type
Y10T 74/1953	. . . .	Wringer type
Y10T 74/19535	. .	Follow-up mechanism
Y10T 74/1954	. .	Eccentric driving shaft and axle
Y10T 74/19545	. .	Central driving shaft in axle
Y10T 74/1955	. .	Parallel shafts, adjustable gear mesh
Y10T 74/19555	. .	Varying speed ratio
Y10T 74/1956	. .	Adjustable
Y10T 74/19565	. . .	Relative movable axes
Y10T 74/1957	. . . .	Parallel shafts
Y10T 74/19575	. . . .	Automatic control
Y10T 74/1958	. . . . .	Parallel shafts
Y10T 74/19585	. . .	Fixed axes
Y10T 74/1959	. . . .	Parallel shafts
Y10T 74/19595	. . . .	Automatic control
Y10T 74/196	. . . . .	Parallel shafts
Y10T 74/19605	. .	Reversing means
Y10T 74/19609	. . .	Governor control
Y10T 74/19614	. .	Disconnecting means
Y10T 74/19619	. .	Displaceable elements
Y10T 74/19623	. .	Backlash take-up
Y10T 74/19628	. .	Pressure distributing
Y10T 74/19633	. .	Yieldability in gear trains
Y10T 74/19637	. .	with brake means for gearing
Y10T 74/19642	. .	Directly cooperating gears
Y10T 74/19647	. . .	Parallel axes or shafts
Y10T 74/19651	. . . .	External type
Y10T 74/19656	. . . . .	Pin teeth
Y10T 74/1966	. . .	Intersecting axes
Y10T 74/19665	. . . .	Bevel gear type
Y10T 74/1967	. . .	Rack and pinion

Y10T 74/19674	. . .	Spur and bevel
Y10T 74/19679	. . .	Spur
Y10T 74/19684	. . . .	Motor and gearing
Y10T 74/19688	. . .	Bevel
Y10T 74/19693	. . . .	Motor vehicle drive
Y10T 74/19698	. . .	Spiral
Y10T 74/19702	. . . .	Screw and nut
Y10T 74/19707	. . . . .	Plural longitudinally variably spaced nuts
Y10T 74/19712	. . . . .	Threadless
Y10T 74/19716	. . . . .	Non-linear screw
Y10T 74/19721	. . . . .	Thread geometry
Y10T 74/19726	. . . . . .	Thread pitch varies over axial length
Y10T 74/1973	. . . . . .	Shaft thread is spirally wound wire
Y10T 74/19735	. . . . . .	Nut disengageable from screw
Y10T 74/1974	. . . . . .	Nut segments hinged parallel to shaft [e.g., clam shell-type, etc.]
Y10T 74/19744	. . . . .	Rolling element engaging thread
Y10T 74/19749	. . . . . .	Recirculating rolling elements
Y10T 74/19753	. . . . . . .	Plural independent recirculating element paths
Y10T 74/19758	. . . . . . .	Single thread common to plural paths
Y10T 74/19763	. . . . . . .	Roller return path in shaft
Y10T 74/19767	. . . . . . .	Return path geometry
Y10T 74/19772	. . . . . . .	Rolling element deflector
Y10T 74/19777	. . . . . . .	Interconnected or cooperating rollers or roller structure
Y10T 74/19781	. . . . . .	Non-recirculating rolling elements
Y10T 74/19786	. . . . . . .	Captured sphere
Y10T 74/19791	. . . . . . .	Cylindrical or quasi-cylindrical roller element [e.g., inclined roller, etc.]
Y10T 74/19795	. . . . . . . .	Parallel to shaft
Y10T 74/198	. . . . . . . .	Perpendicular to shaft
Y10T 74/19805	. . . . . .	Less than 360 degrees of contact between nut and screw
Y10T 74/19809	. . . . . .	Independent nut segments
Y10T 74/19814	. . . . . . . .	Integral deformable tangs engaging screw
Y10T 74/19819	. . . . .	Driven rack or shaft
Y10T 74/19823	. . . . .	Screw
Y10T 74/19828	. . . . .	Worm
Y10T 74/19833	. . . . .	Variable speed
Y10T 74/19837	. . . . .	Intermittent motion
Y10T 74/19842	. . . . .	Distribution of pressure
Y10T 74/19847	. . .	torque actuated safety devices

Y10T 74/19851	. .	Gear and rotary bodies
Y10T 74/19856	. . .	Laterally-spaced wheels
Y10T 74/1986	. . .	Radially-spaced wheels
Y10T 74/19865	. . .	with flywheel
Y10T 74/1987	. .	Rotary bodies
Y10T 74/19874	. . .	Mutilated
Y10T 74/19879	. . .	Geneva
Y10T 74/19884	. . .	Irregular teeth and bodies
Y10T 74/19888	. . .	External and internal teeth
Y10T 74/19893	. . .	Sectional
Y10T 74/19898	. . . .	Backlash take-up
Y10T 74/19902	. . . . .	Screw and nut
Y10T 74/19907	. . . .	Sound deadening
Y10T 74/19912	. . . .	Differential disks
Y10T 74/19916	. . . .	Multiple disks
Y10T 74/19921	. . . .	Separate rim
Y10T 74/19926	. . . . .	Detachable
Y10T 74/1993	. . . .	Segmental rim
Y10T 74/19935	. . . .	Sheet metal
Y10T 74/1994	. . . .	Diametrically split
Y10T 74/19944	. . . .	Shaft-admitting insert
Y10T 74/19949	. .	Teeth
Y10T 74/19953	. . .	Worm and helical
Y10T 74/19958	. . .	Bevel
Y10T 74/19963	. . .	Spur
Y10T 74/19967	. . . .	Yieldable
Y10T 74/19972	. . . .	form
Y10T 74/19977	. . . . .	Antifriction
Y10T 74/19981	. . . . .	Roller
Y10T 74/19986	. . . . .	Twisted
Y10T 74/19991	. .	Lubrication
Y10T 74/19995	. . .	Teeth
Y10T 74/20	. .	Control lever and linkage systems
Y10T 74/20006	. .	Resilient connections
Y10T 74/20012	. .	Multiple controlled elements
Y10T 74/20018	. . .	Transmission control
Y10T 74/20024	. . . .	Fluid actuator
Y10T 74/2003	. . . .	Electrical actuator
Y10T 74/20037	. . . .	Occupant propelled vehicle
Y10T 74/20043	. . . . .	Transmission controlled by flexible cable

Y10T 74/20049	. . . .	Transmission controlled by flexible cable
Y10T 74/20055	. . . .	Foot operated
Y10T 74/20061	. . . . .	Multiple foot-operated controls
Y10T 74/20067	. . . .	Control convertible between automatic and manual operation
Y10T 74/20073	. . . .	Control of plural mechanisms [e.g., control of transmission and control of 4 - wheel drive]
Y10T 74/20079	. . . . .	Separate control levers
Y10T 74/20085	. . . .	Restriction of shift, gear selection, or gear engagement
Y10T 74/20091	. . . . .	Prevention of reverse shift
Y10T 74/20098	. . . . .	Separate actuator to disengage restrictor
Y10T 74/20104	. . . . .	Shift element interlock
Y10T 74/2011	. . . . .	with detent, recess, notch, or groove
Y10T 74/20116	. . . . .	Resiliently biased interlock
Y10T 74/20122	. . . . .	Spherical restrictor
Y10T 74/20128	. . . . .	Resiliently biased restrictor
Y10T 74/20134	. . . .	having vibration damper
Y10T 74/2014	. . . .	Manually operated selector [e.g., remotely controlled device, lever, push button, rotary dial, etc.]
Y10T 74/20146	. . . . .	Control lever on steering column
Y10T 74/20152	. . . . .	Control lever movable through plural planes
Y10T 74/20159	. . . . .	Control lever movable through plural planes
Y10T 74/20165	. . . . .	Spherical mount [e.g., ball and socket]
Y10T 74/20171	. . . . .	Resiliently biased control lever
Y10T 74/20177	. . . .	Particular element [e.g., shift fork, template, etc.]
Y10T 74/20183	. . . . .	Shift fork structure
Y10T 74/20189	. . . .	Foot operated
Y10T 74/20195	. . . .	Offset extension
Y10T 74/20201	. . . .	Control moves in two planes
Y10T 74/20207	. . . .	Multiple controlling elements for single controlled element
Y10T 74/20213	. . . .	Interconnected
Y10T 74/2022	. . . .	Hand and foot
Y10T 74/20226	. . . . .	Accelerator
Y10T 74/20232	. . . .	Marine
Y10T 74/20238	. . . .	Interlocked
Y10T 74/20244	. . . .	Push button
Y10T 74/2025	. . . .	Rod blocks actuation of rotary member
Y10T 74/20256	. . . .	Steering and controls assemblies
Y10T 74/20262	. . . .	Rotary control shaft
Y10T 74/20268	. . . .	Reciprocating control elements
Y10T 74/20274	. . . . .	Flexible

Y10T 74/2028	. . . . .	Handle bar type
Y10T 74/20287	. . . . .	Flexible control element
Y10T 74/20293	. . . . .	with horn control
Y10T 74/20299	. . . . .	Antirattling elements
Y10T 74/20305	. . . . .	Robotic arm
Y10T 74/20311	. . . . .	including power cable or connector
Y10T 74/20317	. . . . .	including electric motor
Y10T 74/20323	. . . . .	including flaccid drive element
Y10T 74/20329	. . . . .	Joint between elements
Y10T 74/20335	. . . . .	Wrist
Y10T 74/20341	. . . . .	Power elements as controlling elements
Y10T 74/20348	. . . . .	Planar surface with orthogonal movement and rotation
Y10T 74/20354	. . . . .	Planar surface with orthogonal movement only
Y10T 74/2036	. . . . .	Pair of power elements
Y10T 74/20366	. . . . .	Power and manual controlling elements
Y10T 74/20372	. . . . .	Manual controlling elements
Y10T 74/20378	. . . . .	Planar surface with orthogonal movement or rotation
Y10T 74/20384	. . . . .	Levers
Y10T 74/2039	. . . . .	Pair of levers
Y10T 74/20396	. . . . .	Hand operated
Y10T 74/20402	. . . . .	Flexible transmitter [e.g., Bowden cable]
Y10T 74/20408	. . . . .	Constant tension sustaining
Y10T 74/20414	. . . . .	Hydraulic control
Y10T 74/2042	. . . . .	and hand operator
Y10T 74/20426	. . . . .	Slidable
Y10T 74/20432	. . . . .	for moving a mirror
Y10T 74/20438	. . . . .	Single rotatable lever [e.g., for bicycle brake or derailleur]
Y10T 74/20444	. . . . .	including rolling antifriction elements
Y10T 74/2045	. . . . .	and sheath support, connector, or anchor
Y10T 74/20456	. . . . .	Specific cable or sheath structure
Y10T 74/20462	. . . . .	Specific cable connector or guide
Y10T 74/20468	. . . . .	Sliding rod
Y10T 74/20474	. . . . .	Rotatable rod, shaft, or post
Y10T 74/2048	. . . . .	Gear, drum, and cable
Y10T 74/20486	. . . . .	Drum and cable
Y10T 74/20492	. . . . .	Gear
Y10T 74/20498	. . . . .	Variable ratio
Y10T 74/20504	. . . . .	Screw and nut
Y10T 74/2051	. . . . .	Adjustable
Y10T 74/20516	. . . . .	Mountings

Y10T 74/20522	. . . . .	Antenna
Y10T 74/20528	. .	Foot operated
Y10T 74/20534	. . .	Accelerator
Y10T 74/2054	. . .	Signal
Y10T 74/20546	. .	Knee operated
Y10T 74/20552	. . .	Elbow
Y10T 74/20558	. .	Variable output force
Y10T 74/20564	. . .	Flexible
Y10T 74/2057	. . .	Variable input leverage
Y10T 74/20576	. .	Elements
Y10T 74/20582	. . .	Levers
Y10T 74/20588	. . . .	toggle
Y10T 74/20594	. . . . .	Lazy tongs
Y10T 74/206	. . . .	Adjustable
Y10T 74/20606	. . . .	Swing posts
Y10T 74/20612	. . . .	Hand
Y10T 74/20618	. . . . .	Jointed
Y10T 74/20624	. . . . .	Adjustable
Y10T 74/2063	. . . .	Stops
Y10T 74/20636	. . .	Detents
Y10T 74/20642	. . . .	Hand crank
Y10T 74/20648	. . . .	Interrelated lever release
Y10T 74/20654	. . . .	Gear
Y10T 74/2066	. . . .	Friction
Y10T 74/20666	. . . .	Lever engaging
Y10T 74/20672	. . . .	Lever engaging rack
Y10T 74/20678	. . . . .	Pivoted
Y10T 74/20684	. . . . .	Lever carried pawl
Y10T 74/2069	. . . . .	Handle release
Y10T 74/20696	. . . . .	Finger lever release
Y10T 74/20702	. . . . .	Slidable
Y10T 74/20708	. . . . .	Pedal controlled
Y10T 74/20714	. . . .	Lever carried rack
Y10T 74/2072	. . . . .	Pivoted
Y10T 74/20726	. . . . .	Pedal controlled
Y10T 74/20732	. . .	Handles
Y10T 74/20738	. . . .	Extension
Y10T 74/20744	. . . .	Hand crank
Y10T 74/2075	. . . . .	Extensible
Y10T 74/20756	. . . . .	Collapsible

Y10T 74/20762	. . . .	Shaft connections
Y10T 74/20768	. . . . .	Engine starter type
Y10T 74/20774	. . . . .	Holders
Y10T 74/2078	. . . .	Handle bars
Y10T 74/20786	. . . . .	Spring biased or supported
Y10T 74/20792	. . . . .	Folding or adjustable
Y10T 74/20798	. . . . .	Sectional
Y10T 74/20804	. . . . .	Simultaneously movable
Y10T 74/2081	. . . . .	Continuous
Y10T 74/20816	. . . . .	with handle latch
Y10T 74/20822	. . . . .	Attachments and accessories
Y10T 74/20828	. . . . .	Handholds and grips
Y10T 74/20834	. . . .	Hand wheels
Y10T 74/2084	. . . . .	Knob or dial
Y10T 74/20846	. . . . .	Slidable
Y10T 74/20852	. . . . .	Pivoted
Y10T 74/20858	. . . . .	Releasable
Y10T 74/20864	. . . . .	Handles
Y10T 74/2087	. . . . .	Rim grips and covers
Y10T 74/20876	. . . .	Caps and covers
Y10T 74/20882	. . .	Rocker arms
Y10T 74/20888	. . .	Pedals
Y10T 74/20894	. . . .	Treadles
Y10T 74/209	. . . .	Extension
Y10T 74/20906	. . . . .	Offset
Y10T 74/20912	. . . .	Pads and covers
Y10T 74/20918	. . .	Foot rests
Y10T 74/20924	. . .	Controller checks
Y10T 74/2093	. . .	Slot closers and lever guards
Y10T 74/21	. .	Elements
Y10T 74/2101	. .	Cams
Y10T 74/2102	. . .	Adjustable
Y10T 74/2104	. . . .	Flexible strip
Y10T 74/2105	. . . .	Memory devices
Y10T 74/2106	. . . .	Timer devices
Y10T 74/2107	. . .	Follower
Y10T 74/2109	. .	Balancing for drum, e.g., washing machine or arm-type structure, etc., centrifuge, etc.
Y10T 74/211	. .	Eccentric
Y10T 74/2111	. . .	Plural, movable relative to each other [including ball[s]]

Y10T 74/2112	. . . . Concentric
Y10T 74/2114	. . . Adjustable
Y10T 74/2115	. . . . Radially
Y10T 74/2116	. . . having anti-friction means, e.g., roller bearing, lubrication, etc.
Y10T 74/2117	. . Power generating-type flywheel
Y10T 74/2119	. . . Structural detail, e.g., material, configuration, superconductor, discs, laminated, etc.
Y10T 74/212	. . . . Containing fiber or filament
Y10T 74/2121	. . Flywheel, motion smoothing-type
Y10T 74/2122	. . . with fluid balancing means
Y10T 74/2123	. . . . and pressure compensation
Y10T 74/2125	. . . . and elastic device
Y10T 74/2126	. . . . and bearings
Y10T 74/2127	. . . with electrical or magnetic damping
Y10T 74/2128	. . . Damping using swinging masses, e.g., pendulum type, etc.
Y10T 74/213	. . . Damping by increasing frictional force
Y10T 74/2131	. . . Damping by absorbing vibration force [via rubber, elastomeric material, etc.]
Y10T 74/2132	. . . Structural detail, e.g., fiber, held by magnet, etc.
Y10T 74/2133	. . Pawls and ratchets
Y10T 74/2135	. . . Noiseless
Y10T 74/2136	. . . Pivoted pawls
Y10T 74/2137	. . . . Single tooth
Y10T 74/2138	. . . . Flexible single tooth
Y10T 74/214	. . . . Multiple tooth
Y10T 74/2141	. . . Sliding pawls
Y10T 74/2142	. . Pitmans and connecting rods
Y10T 74/2143	. . . Radial
Y10T 74/2144	. . . Yieldable
Y10T 74/2146	. . . . Longitudinal springs
Y10T 74/2147	. . . . Fluid cushion
Y10T 74/2148	. . . . Automatic release
Y10T 74/2149	. . . . . toggle link type
Y10T 74/2151	. . . Longitudinally adjustable
Y10T 74/2152	. . . Hollow rod, lubricated
Y10T 74/2153	. . . Sheet metal type
Y10T 74/2154	. . . Counterbalanced
Y10T 74/2156	. . . . Weight type
Y10T 74/2157	. . . . . Rotating
Y10T 74/2158	. . . . Spring

Y10T 74/2159	. . .	Section coupled
Y10T 74/216	. . .	Bearings, adjustable
Y10T 74/2162	. . .	Engine type
Y10T 74/2163	. . .	Idler arm
Y10T 74/2164	. .	Cranks and pedals
Y10T 74/2165	. . .	with attached gear
Y10T 74/2167	. . .	Variable
Y10T 74/2168	. . .	Pedals
Y10T 74/2169	. . . .	Counterbalanced
Y10T 74/217	. . . .	with toe or shoe clips
Y10T 74/2172	. . . .	Adjustable or folding
Y10T 74/2173	. .	Cranks and wrist pins
Y10T 74/2174	. . .	Multiple throw
Y10T 74/2175	. . . .	Sectional
Y10T 74/2177	. . .	Sectional
Y10T 74/2178	. . .	Yieldable
Y10T 74/2179	. . .	Adjustable
Y10T 74/218	. . . .	Automatically
Y10T 74/2181	. . .	Variable
Y10T 74/2183	. . .	Counterbalanced
Y10T 74/2184	. . . .	Vibration dampers
Y10T 74/2185	. . .	Lubricated
Y10T 74/2186	. .	Gear casings
Y10T 74/2188	. . .	Axle and torque tubes
Y10T 74/2189	. . .	Cooling
Y10T 74/219	. .	Guards
Y10T 74/2191	. . .	for rotary member
Y10T 74/2193	. .	Guard mechanisms
Y10T 74/2194	. . .	Automatic
Y10T 74/2195	. . . .	Oscillating member actuator
Y10T 74/2196	. . . .	Reciprocating member actuator
Y10T 74/2198	. . .	Operator controlled
Y10T 74/2199	. . .	Set screw
Y10T 74/22	. .	Miscellaneous

Former US Class 82 Series

Y10T 82/00	Turning
Y10T 82/10	. Process of turning
Y10T 82/11	. Talking machine tablet

- Y10T 82/12 . Radially moving rotating tool inside bore
- Y10T 82/122 . . Forming non-circular bore
- Y10T 82/125 . . Tool simultaneously moving axially
- Y10T 82/128 . . . Pivoted to tool-carrier
- Y10T 82/13 . Pattern section
- Y10T 82/135 . . Cam-controlled cutter
- Y10T 82/14 . Axial pattern
- Y10T 82/141 . . having transverse tool and templet guide
- Y10T 82/142 . . . with workpiece gauge
- Y10T 82/143 . . . having electrical actuator
- Y10T 82/145 And hydraulic actuator
- Y10T 82/147 . . . having hydraulic actuator
- Y10T 82/148 . . Pivoted tool rest
- Y10T 82/149 . . Profiled cutter
- Y10T 82/15 . Tapers
- Y10T 82/152 . . Offset work axis
- Y10T 82/154 . . Transversely shifted cutter
- Y10T 82/156 . . . Templet controlled
- Y10T 82/158 . . . Gear controlled
- Y10T 82/16 . Severing or cut-off
- Y10T 82/16016 . . Processes
- Y10T 82/16032 . . Automatic and/or triggered control
- Y10T 82/16049 . . Combined with means to sharpen tool[s]
- Y10T 82/16065 . . Combined with means to apply fluid
- Y10T 82/16081 . . Combined with means to heat tool and/or work
- Y10T 82/16098 . . with dust or chip handling
- Y10T 82/16114 . . including scrap cutting means
- Y10T 82/16131 . . Flying cutter type
- Y10T 82/16147 . . Cutting couple straddling work
- Y10T 82/16163 . . . with pattern, guide or cam means [noncircular product]
- Y10T 82/16181 . . . Plural cutting means [pairs, or pair, plus single]
- Y10T 82/16196 . . . Rotary shear pair
- Y10T 82/16213 Tool axes parallel to axis of work rotation
- Y10T 82/16229 . . Interrelated means for tool infeed and circumrotation
- Y10T 82/16245 . . . Dependent upon reaction to work
- Y10T 82/16262 . . . Infeed cam disk rotation geared to tool holder rotation
- Y10T 82/16278 Axial infeed cam
- Y10T 82/16295 including centrifugal balancing means
- Y10T 82/16311 Scroll plate infeed cam
- Y10T 82/16327 . . . Infeed cam plate braked with respect to tool[s] carrier plate

Y10T 82/16344	. . .	Orbital cogwheel and fixed detent
Y10T 82/16361	. . .	Common gear means
Y10T 82/16377	. . . .	including adjustable means to vary gear speed
Y10T 82/16393	. . . .	with manual disconnect lever
Y10T 82/16409	. . .	with means to feed work
Y10T 82/16426	. .	Infeed means
Y10T 82/16442	. . .	with means to circumrotate tool[s] about work
Y10T 82/16459	. . . .	Fluid means for relative tool actuation
Y10T 82/16475	. . . .	Gear means for tool actuation
Y10T 82/16491	. . . . .	including axial cam
Y10T 82/16508	. . . . .	with indicator
Y10T 82/16524	. . . .	Bell crank linkage for tool[s] holder
Y10T 82/16541	. . . .	Resilient means for tool actuation
Y10T 82/16557	. . . . .	with means for manual retraction
Y10T 82/16573	. . .	Hand crank for tool holder
Y10T 82/16591	. . .	Power driven eccentric
Y10T 82/16606	. . . .	Fluid motor
Y10T 82/16622	. . . .	Plural tools
Y10T 82/16639	. . .	Tool within work
Y10T 82/16655	. . .	with means to rotate tool[s]
Y10T 82/16672	. . . .	including rotatable cutters supporting work
Y10T 82/16688	. . . .	Planetating work mandrels
Y10T 82/16704	. . . .	Pivoted tool carriage
Y10T 82/16721	. . . . .	with adjustable work stops
Y10T 82/16737	. . . .	Eccentric periphery rotary tool
Y10T 82/16754	. . . .	Means to feed work axially
Y10T 82/16771	. . . .	Translatable work support carriage
Y10T 82/16786	. . . .	with tool groove in support roll[s]
Y10T 82/16803	. . .	Rotatable tool[s] driven by contact with work
Y10T 82/16819	. . . .	Axially movable tool support
Y10T 82/16836	. . . . .	Freely floating parallel to axis
Y10T 82/16852	. . . . .	with supplemental nonrotative tool
Y10T 82/16868	. . . . .	including clutch control for work rotation
Y10T 82/16885	. . . .	including resilient means urging work against rotary support
Y10T 82/16901	. . .	Separate means for plural tools
Y10T 82/16918	. . .	Spring urged
Y10T 82/16934	. . . .	For window shade
Y10T 82/16951	. . .	Tool adjustment and/or stop
Y10T 82/16967	. . .	with means to support and/or rotate work
Y10T 82/16983	. . .	with means to feed work

Y10T 82/17	. Lathe for pulley
Y10T 82/18	. Lathe for wheel or axle
Y10T 82/185	. . <u>In situ</u> lathe for railroad wheel
Y10T 82/19	. Lathe for crank or crank pin
Y10T 82/192	. . Portable lathe for crank pin
Y10T 82/195	. . having work oscillator
Y10T 82/198	. . . having work driver
Y10T 82/20	. Lathe for screw cutting
Y10T 82/205	. . having swinging feed nut and tool bar
Y10T 82/21	. Portable lathe for brake drum, disc, or shoe
Y10T 82/22	. Portable lathe for pipe turning
Y10T 82/23	. Portable lathe for piston grooving
Y10T 82/24	. Bench lathe
Y10T 82/245	. . Watchmaker's lathe
Y10T 82/25	. Lathe
Y10T 82/2502	. . with program control
Y10T 82/2504	. . . And transmission
Y10T 82/2506	. . . And tool turret
Y10T 82/2508	. . with tool turret
Y10T 82/2511	. . Vertical
Y10T 82/2512	. . having facing tool fed transverse to work
Y10T 82/2514	. . with work feeder or remover
Y10T 82/2516	. . . Magazine type
Y10T 82/2518	. . . . Bar feeder
Y10T 82/2521	. . . Bar feeder
Y10T 82/2522	. . Portable
Y10T 82/2524	. . Multiple
Y10T 82/2527	. . having hollow cutter head
Y10T 82/2529	. . Revolvable cutter heads
Y10T 82/2531	. . Carriage feed
Y10T 82/2533	. . . Control
Y10T 82/2535	. . . . Electrical type
Y10T 82/2537	. . . Apron mechanism
Y10T 82/2539	. . . . Feednut control
Y10T 82/2541	. . . Slide rest
Y10T 82/2543	. . . . Multiple tool support
Y10T 82/2545	. . . . Tool relief
Y10T 82/2547	. . . Change gears
Y10T 82/2549	. . . Feedscrews and rods
Y10T 82/2552	. . Headstock

Y10T 82/2554	. . . Speed changing gear
Y10T 82/2556	. . . . Speed change gears for maintaining constant cutting speed
Y10T 82/2558	. . . Spindle reverser
Y10T 82/2561	. . . Spindle or work angler
Y10T 82/2562	. . . Spindle and bearings
Y10T 82/2564	. . Tailstock
Y10T 82/2566	. . Bed
Y10T 82/2568	. . Center
Y10T 82/2571	. . . Alignment adjuster
Y10T 82/2572	. . Attachment
Y10T 82/2574	. . . Stop [e.g., carriage, tool, work, etc.]
Y10T 82/2577	. . . . Tool slide
Y10T 82/2579	. . . . Collet or spindle
Y10T 82/2581	. . . . Indexible [e.g., roll type, etc.]
Y10T 82/2583	. . Tool and work rest
Y10T 82/2585	. . Tool rest
Y10T 82/2587	. . . Turret type holder [e.g., multiple tools, etc.]
Y10T 82/2589	. . . Quick release tool or holder clamp
Y10T 82/2591	. . . Tool post
Y10T 82/2593	. . Work rest
Y10T 82/2595	. . . with noise or vibration dampener
Y10T 82/2597	. . . Center rest
Y10T 82/26	. Work driver
Y10T 82/262	. . Lathe dog
Y10T 82/264	. . . Cam grip
Y10T 82/266	. . Mandrel
Y10T 82/268	. . . Expansible
Y10T 82/27	. Centerer
Y10T 82/28	. Drill press attachment for turning
Y10T 82/29	. Attachment for cutting a valve
Y10T 82/30	. Miscellaneous

Former US Class 83 series

Y10T 83/00	Cutting
Y10T 83/02	. Other than completely through work thickness
Y10T 83/0207	. . or through work presented
Y10T 83/0215	. . . Including use of rotary scoring blade
Y10T 83/0222	. . . . Plural independent rotary scoring blades
Y10T 83/023	. . . With infeeding of work

Y10T 83/0237	. . Pricking
Y10T 83/0244	. . . Including use of orbiting tool carrier
Y10T 83/0252	. . . With infeeding of tool
Y10T 83/0259	. . Edge trimming [e.g., chamfering, etc.]
Y10T 83/0267	. . Splitting
Y10T 83/0274	. . . By use of endless band or chain knife
Y10T 83/0281	. . . By use of rotary blade
Y10T 83/0289	. . . . Plural independent rotary blades
Y10T 83/0296	. . . With infeeding of work
Y10T 83/0304	. . Grooving
Y10T 83/0311	. . . By use of plural independent rotary blades
Y10T 83/0319	. . . . Forming common groove
Y10T 83/0326	. . . . Blades turning about perpendicular axes
Y10T 83/0333	. . Scoring
Y10T 83/0341	. . . Processes
Y10T 83/0348	. . . Active means to control depth of score
Y10T 83/0356	. . . Serially
Y10T 83/0363	. . . Plural independent scoring blades
Y10T 83/037	. . . . Rotary scoring blades
Y10T 83/0378	. . . . . On opposite sides of work
Y10T 83/0385	. . . Rotary scoring blade
Y10T 83/0393	. . . . With means to rotate blade
Y10T 83/04	. Processes
Y10T 83/0405	. . With preparatory or simultaneous ancillary treatment of work
Y10T 83/041	. . . By heating or cooling
Y10T 83/0414	. . . . At localized area [e.g., line of separation]
Y10T 83/0419	. . . By distorting within elastic limit
Y10T 83/0424	. . . . By stretching
Y10T 83/0429	. . . . By compressing
Y10T 83/0433	. . . . By flexing around or by tool
Y10T 83/0438	. . . . . To conform to shape of tool
Y10T 83/0443	. . . By fluid application
Y10T 83/0448	. . With subsequent handling [i.e., of product]
Y10T 83/0453	. . . By fluid application
Y10T 83/0457	. . . By retaining or reinserting product in workpiece
Y10T 83/0462	. . . By accelerating travel
Y10T 83/0467	. . . By separating products from each other
Y10T 83/0472	. . . By moving work support to which a tacky product is adhered
Y10T 83/0476	. . Including stacking of plural workpieces
Y10T 83/0481	. . Puncturing

Y10T 83/0486	. . With manipulation of tool protective strip [e.g., backing strip]
Y10T 83/0491	. . Cutting of interdigitating products
Y10T 83/0495	. . Making and using a registration cut
Y10T 83/05	. . With reorientation of tool between cuts
Y10T 83/0505	. . With reorientation of work between cuts
Y10T 83/051	. . . Relative to same tool
Y10T 83/0515	. . During movement of work past flying cutter
Y10T 83/0519	. . . Cyclically varying rate of tool or work movement
Y10T 83/0524	. . Plural cutting steps
Y10T 83/0529	. . . Blanking and cutting
Y10T 83/0534	. . . . Cutting to join blanked holes
Y10T 83/0538	. . . Repetitive transverse severing from leading edge of work
Y10T 83/0543	. . . . Alternately forming products of less than total width of work
Y10T 83/0548	. . . . With longitudinal severing
Y10T 83/0553	. . . . . Effected by plural steps
Y10T 83/0558	. . . . . Along zigzag or undulant line or cut
Y10T 83/0562	. . . . . Prior to transverse severing
Y10T 83/0567	. . . . Nonrectilinear cutting
Y10T 83/0572	. . . Plural cutting steps effect progressive cut
Y10T 83/0577	. . . Repetitive blanking
Y10T 83/0581	. . Cutting part way through from opposite sides of work
Y10T 83/0586	. . Effecting diverse or sequential cuts in same cutting step
Y10T 83/0591	. . Cutting by direct application of fluent pressure to work
Y10T 83/0596	. . Cutting wall of hollow work
Y10T 83/06	. . Blanking
Y10T 83/0605	. . Cut advances across work surface
Y10T 83/061	. With manually actuated means to disturb cyclic operation
Y10T 83/081	. With randomly actuated stopping means
Y10T 83/083	. . With means to permit subsequent hand operation
Y10T 83/084	. . With stop-signal-responsive means to actuate auxiliary cutter
Y10T 83/086	. . With sensing of product or product handling means
Y10T 83/088	. . Responsive to tool detector or work-feed-means detector
Y10T 83/089	. . . Responsive to tool characteristic
Y10T 83/091	. . Responsive to work sensing means
Y10T 83/093	. . . Of buckled work
Y10T 83/094	. . . . Running loop
Y10T 83/096	. . . Detector supported on or urged against work
Y10T 83/098	. . . . Resiliently biased
Y10T 83/099	. . Manually operated

- Y10T 83/101 . With stopping means effective on completion of predetermined number of tool cycles
- Y10T 83/121 . With means to accomplish delayed stopping after cessation of cyclic operation
- Y10T 83/141 . With means to monitor and control operation [e.g., self-regulating means]
- Y10T 83/145 . . Including means to monitor product
- Y10T 83/148 . . Including means to correct the sensed operation
- Y10T 83/152 . . . And modify another operation
- Y10T 83/155 . . . Optimizing product from unique workpiece
- Y10T 83/159 . . Including means to compensate tool speed for work-feed variations
- Y10T 83/162 . With control means responsive to replaceable or selectable information program
- Y10T 83/164 . . For cutting component of animal; e.g., hair clipper
- Y10T 83/166 . . Removable element carries program
- Y10T 83/169 . . . Indeterminate length, web or strand
- Y10T 83/171 Magnetic
- Y10T 83/173 . . Arithmetically determined program
- Y10T 83/175 . . . With condition sensor
- Y10T 83/178 Responsive to work
- Y10T 83/18 . . . With operator input means
- Y10T 83/182 . With means to weigh product
- Y10T 83/202 . With product handling means
- Y10T 83/2022 . . Initiated by means responsive to product or work
- Y10T 83/2024 . . . Responsive to work
- Y10T 83/2027 . . Initiated by means directly responsive to tool movement
- Y10T 83/2029 . . . In return motion of tool
- Y10T 83/2031 . . Including means to drape the product
- Y10T 83/2033 . . Including means to form or hold pile of product pieces
- Y10T 83/2035 . . . In nested relation
- Y10T 83/2037 . . . In stacked or packed relation
- Y10T 83/204 Stacker sweeps along product support
- Y10T 83/2042 Including cut pieces overlapped on delivery means
- Y10T 83/2044 And means to separate product portions
- Y10T 83/2046 Including means to move stack bodily
- Y10T 83/2048 By movement of stack holder
- Y10T 83/205 By timed relocation of holder along path of stack gscheme-change-itemth
- Y10T 83/2053 Interrelated adjustment of holder movement and work-feeder
- Y10T 83/2055 And means to resist stack movement
- Y10T 83/2057 Including means to deliver individual pieces to a stack holder
- Y10T 83/2059 With spindle to enter a hole or to make hole in product
- Y10T 83/2061 By face-engaging means to push product broadside into stacked relation

Y10T 83/2063	. . . . Upon emergence from hollow cutter
Y10T 83/2066	. . By fluid current
Y10T 83/2068	. . . Plural blasts directed against plural product pieces
Y10T 83/207	. . . By suction means
Y10T 83/2072	. . By brush means
Y10T 83/2074	. . Including means to divert one portion of product from another
Y10T 83/2077	. . . By kerf entering guide
Y10T 83/2079	. . . Remaining or re-inserted product portion from base material
Y10T 83/2081	. . . Gravity type
Y10T 83/2083	. . . Deflecting guide
Y10T 83/2085	. . . . Positionable gate in product flow path
Y10T 83/2087	. . . Diverging product movers
Y10T 83/209	. . Including means to replace product in base material after cutting
Y10T 83/2092	. . Means to move, guide, or permit free fall or flight of product
Y10T 83/2094	. . . Means to move product at speed different from work speed
Y10T 83/2096	. . . Means to move product out of contact with tool
Y10T 83/2098	. . . . With means to effect subsequent conveying or guiding
Y10T 83/21	. . . . Out of contact with a rotary tool
Y10T 83/2103	. . . . . Mover surrounds axis of tool rotation
Y10T 83/2105	. . . . . Mover mounted on rotary tool
Y10T 83/2107	. . . . . . For radial movement of product
Y10T 83/2109	. . . . . . . Resiliently mounted
Y10T 83/2111	. . . . . Mover is resiliently mounted
Y10T 83/2113	. . . . . Pivoted mover
Y10T 83/2116	. . . . . . And plural rotating tools
Y10T 83/2118	. . . . . Stationary mover
Y10T 83/212	. . . . . . And plural rotating tools
Y10T 83/2122	. . . . By ejector within a hollow cutter
Y10T 83/2124	. . . . . And means to strip the outer surface of a cutter
Y10T 83/2127	. . . . . Ejector operated with return stroke of cutter
Y10T 83/2129	. . . . . By means carried by cooperating cutter
Y10T 83/2131	. . . . . By cam-operated ejector
Y10T 83/2133	. . . . . By resiliently biased ejector
Y10T 83/2135	. . . . Moving stripper timed with tool stroke
Y10T 83/2137	. . . . . And alternatively movable to or from operating position
Y10T 83/214	. . . . . Latched stripper released by tool return
Y10T 83/2142	. . . . . Plural strippers operative upon plural tools
Y10T 83/2144	. . . . . Single stripper operative upon plural tools
Y10T 83/2146	. . . . . Spring arm stripper
Y10T 83/2148	. . . . . Linkage actuated

Y10T 83/215	. . . . .	Carried by moving tool element or its support
Y10T 83/2153	. . . . .	Fluid pressure actuated stripper
Y10T 83/2155	. . . . .	Stripper biased against product
Y10T 83/2157	. . . . .	Elastomeric stripper contacting product
Y10T 83/2159	. . . . .	By spring means
Y10T 83/2161	. . . . .	By free weight of stripper
Y10T 83/2163	. . . . .	Stripper biased against product
Y10T 83/2166	. . . . .	Spring biased stripper
Y10T 83/2168	. . . . .	Manually operated stripper
Y10T 83/217	. . . . .	Stationary stripper
Y10T 83/2172	. . . . .	Stripper encircles moving tool
Y10T 83/2174	. . . . .	Blockable exit port
Y10T 83/2177	. . . . .	Tool conforming member interposed between tool and work
Y10T 83/2179	. . . . .	Including means to move, or resist movement of, cut pieces along delivery chute
Y10T 83/2181	. . . . .	Active delivery means mounted on tool support
Y10T 83/2183	. . . . .	Product mover including gripper means
Y10T 83/2185	. . . . .	Suction gripper
Y10T 83/2187	. . . . .	Reciprocating product handler
Y10T 83/219	. . . . .	Rotating or oscillating product handler
Y10T 83/2192	. . . . .	Endless conveyor
Y10T 83/2194	. . . . .	And means to remove product therefrom
Y10T 83/2196	. . . . .	Roller[s]
Y10T 83/2198	. . . . .	Tiltable or withdrawable support
Y10T 83/22	. . . . .	Means to move product laterally
Y10T 83/2203	. . . . .	Oscillating means
Y10T 83/2205	. . . . .	Reciprocating means
Y10T 83/2207	. . . . .	Means to move product in a nonrectilinear path
Y10T 83/2209	. . . . .	Guide
Y10T 83/2211	. . . . .	Abutment in path of product being moved by work feeder
Y10T 83/2213	. . . . .	Product-diverting conduit in or from hollow tool
Y10T 83/2216	. . . . .	Inclined conduit, chute or plane
Y10T 83/2218	. . . . .	Abutment interposed in path of free fall or flight of product
Y10T 83/222	. . . . .	With receptacle or support for cut product
Y10T 83/242	. . . . .	With means to clean work or tool
Y10T 83/263	. . . . .	With means to apply transient nonpropellant fluent material to tool or work
Y10T 83/283	. . . . .	With means to control or modify temperature of apparatus or work
Y10T 83/293	. . . . .	Of tool
Y10T 83/303	. . . . .	With tool sharpener or smoother
Y10T 83/313	. . . . .	Spatially fixed tool

- Y10T 83/323 . With means to stretch work temporarily
- Y10T 83/343 . With means to deform work temporarily
- Y10T 83/364 . By fluid blast and/or suction
- Y10T 83/384 . By tool inside hollow work
- Y10T 83/385 . . Work pre-packed with internal tool[s]
- Y10T 83/386 . . With expanding mandrel
- Y10T 83/387 . . Interrelated tool feed means and means to actuate work immobilizer
- Y10T 83/388 . . . Actuated clamp element and work holder coact to position work
- Y10T 83/39 . . Synchronized tool and work feeding means
- Y10T 83/391 . . With means to position tool[s] for cutting
- Y10T 83/392 . . One tool [either internal or external] having compound motion
- Y10T 83/393 . . . Annulus and disc-type tool pair
- Y10T 83/394 . . One tool having unidirectional rotary motion
- Y10T 83/395 . . One tool having only rectilinear motion[s]
- Y10T 83/396 . . . Annulus and disc-type tool pair
- Y10T 83/397 A tool has a sequence of motion in plural paths
- Y10T 83/398 . . . Internal tool is an active cutter
- Y10T 83/40 . . . Multiple external active tools
- Y10T 83/401 Tools operate in a substantially common transverse plane of cut
- Y10T 83/402 With tool actuating cams on a common support
- Y10T 83/403 . . With manually actuated means to position or facilitate positioning of work
- Y10T 83/404 . By means to misalign aligned apertured tools
- Y10T 83/408 . . Combined with another type tool of the class
- Y10T 83/412 . . Rectilinear relative movement only
- Y10T 83/416 . . Rotary relative movement solely about a single pivot
- Y10T 83/42 . . . With plural apertures in one or both carriers
- Y10T 83/424 . By increased tensioning of work-enclosing wire
- Y10T 83/444 . Tool engages work during dwell of intermittent workfeed
- Y10T 83/4443 . . Unicyclic
- Y10T 83/4445 . . . Convertible to and from unicyclic
- Y10T 83/4448 . . . Controlled by mechanical means
- Y10T 83/445 . . With work-moving clamp jaw
- Y10T 83/4453 . . Work moved solely by movable abutment
- Y10T 83/4455 . . Operation initiated by work-driven detector means to measure work length
- Y10T 83/4458 . . Work-sensing means to control work-moving or work-stopping means
- Y10T 83/446 . . . With means to initiate tool feed by same control impulse
- Y10T 83/4463 . . Work-sensing means to initiate tool feed
- Y10T 83/4465 . . . With work-stopping abutment in sensing means
- Y10T 83/4468 . . Plural tools at same station, one positioned for continuous engagement with work

- Y10T 83/447 . . Plural tools successively actuated at same station
- Y10T 83/4473 . . . During one dwell period
- Y10T 83/4475 . . Tool has motion additional to cutting stroke during tool cycle
- Y10T 83/4478 . . . Tool has additional motion during work dwell
- Y10T 83/448 Included in plural cutting cycles
- Y10T 83/4483 . . . Tool has work-feeding motion
- Y10T 83/4486 . . With variable direction of work-feed from cycle to cycle
- Y10T 83/4488 . . . In one of certain selected directions
- Y10T 83/4491 . . Interlock between tool actuating and work feed means
- Y10T 83/4493 . . Tool motion initiates work feed and vice versa
- Y10T 83/4496 . . Stored energy means for moving work or tool, loaded by tool or work
- Y10T 83/4498 . . . Work feed means actuates energy storage device for tool
- Y10T 83/4501 . . Work feed means controlled by means mounted on tool or tool support
- Y10T 83/4503 . . . Such means drives the work feed means
- Y10T 83/4506 Work feed means carried by tool or tool support
- Y10T 83/4508 With supplemental work feed means
- Y10T 83/4511 On return stroke of tool
- Y10T 83/4513 . . . Work feed means halted by means on tool or tool support
- Y10T 83/4516 . . Work-feed mechanism in nonfeed motion effects or initiates tool actuation
- Y10T 83/4518 . . . By striking tool actuator
- Y10T 83/4521 Nonfeed motion is reverse to feed motion
- Y10T 83/4523 . . With means to vary number of work-feed increments between tool strokes
- Y10T 83/4526 . . Dwell caused by imposing reverse motion on portion of flexible moving work
- Y10T 83/4529 . . With uninterrupted flow of work from supply source
- Y10T 83/4531 . . Work feed increment shorter than longitudinal tool field
- Y10T 83/4534 . . Unequal work feed increments in recurring series
- Y10T 83/4536 . . . Work carriage carries ratchet means to determine increments
- Y10T 83/4539 . . Means to change tool position, or length or datum position of work- or tool-feed increment
- Y10T 83/4541 . . . With means to vary magnitude of work-feed increment
- Y10T 83/4544 Multi-increment type [e.g., ticket issuing]
- Y10T 83/4546 Length selector initiates machine operation
- Y10T 83/4549 By change in length of one member of feed-driving linkage
- Y10T 83/4551 Rotating member
- Y10T 83/4554 By change of effective shape of driving or driven surface of element of work-feed mechanism
- Y10T 83/4556 By adjustment of fixed stop
- Y10T 83/4559 . . . With means to vary magnitude or base position of tool stroke
- Y10T 83/4561 . . With means to facilitate manual repositioning [shift] of work
- Y10T 83/4564 . . With means to produce plurality of work-feed increments per tool cycle

- Y10T 83/4567 . . . Including supplemental work-feed means
- Y10T 83/4569 Manual
- Y10T 83/4572 With stop adapted to engage abutment surface on work
- Y10T 83/4574 Plurality of work stops successively effective
- Y10T 83/4577 . . Work fed successively to plural tools
- Y10T 83/4579 . . . With change of direction between tools
- Y10T 83/4582 . . Work advance occurs during return stroke of tool
- Y10T 83/4584 . . Dwell defined only by "dead-center" of rotating crank
- Y10T 83/4587 . . Dwell initiated by disengagement of surface of moving frictional feed means from work
- Y10T 83/4589 . . . Feed means has interrupted frictional surface
- Y10T 83/4592 . . . Feed means has rotary motion
- Y10T 83/4594 . . Dwell caused by clamping or blocking work during continuous operation of feed means
- Y10T 83/4597 . . With means to control magnitude of work-feed increment or work acceleration
- Y10T 83/4599 . . . Means to prevent random or excessive work feeds
- Y10T 83/4602 . . . Full stroke required of feed means
- Y10T 83/4604 . . Work feed functions as tool support
- Y10T 83/4607 . . With rotary work-carrier
- Y10T 83/461 . . With abutment to position work being fed with respect to cutter
- Y10T 83/4612 . . . With slip between positioned work and feed means
- Y10T 83/4615 . . Work guide and feed means have open side
- Y10T 83/4617 . . Work feed means modified to maintain clearance from tool
- Y10T 83/462 . . Plurality of work feed means in separate paths
- Y10T 83/4622 . . Intermittent drive type of gearing for work-feed means
- Y10T 83/4625 . . . Gearing modified to lock the work-feed means
- Y10T 83/4627 . . . Mutilated gear in mesh with gear driving work-feed means
- Y10T 83/463 . . Work-feed element contacts and moves with work
- Y10T 83/4632 . . . Comprises a work-moving gripper
- Y10T 83/4635 . . . Comprises element entering aperture in, or engaging abutment surface on, work
- Y10T 83/4637 . . With means to guide, position, or present work to work-feed means
- Y10T 83/464 . . . Means to transport work to work-feed means
- Y10T 83/4642 Including means to pick articles from pack or stack
- Y10T 83/4645 . . With means to clamp work during dwell
- Y10T 83/4647 . . One-revolution clutch in tool drive
- Y10T 83/465 . . Cutting motion of tool has component in direction of moving work
- Y10T 83/4653 . . With means to initiate intermittent tool action
- Y10T 83/4656 . . . Tool moved in response to work-sensing means
- Y10T 83/4659 With means to vary "length" of product

Y10T 83/4662	. . . . .	To vary an end-product "length" [e.g., "crop cut"]
Y10T 83/4664	. . . . .	With photo-electric work-sensing means
Y10T 83/4667	. . . . .	With trip-switch work-sensing means
Y10T 83/467	. . . . .	To initiate feed movement of tool
Y10T 83/4673	. . . . .	And to initiate flying movement of tool
Y10T 83/4676	. . . . .	With work-responsive means to initiate flying movement of tool
Y10T 83/4679	. . . . .	With flying work-gripper means related to tool carrier
Y10T 83/4682	. . . . .	With means controlling flying speed dependent on work speed
Y10T 83/4685	. . . . .	With means to vary frequency of initiation
Y10T 83/4688	. . . . .	By orbitally traveling trigger pin[s]
Y10T 83/4691	. . . . .	Interrelated control of tool and work-feed drives
Y10T 83/4693	. . . . .	With means to concurrently adjust flying frequency and retain flying speed of tool
Y10T 83/4696	. . . . .	Plural diverse flying cutters
Y10T 83/4699	. . . . .	Combined with other type cutter
Y10T 83/4702	. . . . .	With slitter
Y10T 83/4705	. . . . .	Plural separately mounted flying cutters
Y10T 83/4708	. . . . .	With means to render cutter pass[es] ineffective
Y10T 83/4711	. . . . .	With means to produce "mis-cut"
Y10T 83/4714	. . . . .	Oscillating work shifter adjacent cutter
Y10T 83/4717	. . . . .	Work actuated sensor initiates shifter
Y10T 83/472	. . . . .	Wire tool
Y10T 83/4722	. . . . .	On tool support having reciprocation parallel to direction of work-feed
Y10T 83/4725	. . . . .	And rotation about axis parallel to direction of work-feed
Y10T 83/4728	. . . . .	Tool flies by engagement with the work
Y10T 83/4731	. . . . .	Tool merely flexes with moving work
Y10T 83/4734	. . . . .	Flying support or guide for work
Y10T 83/4737	. . . . .	With tool speed regulator
Y10T 83/474	. . . . .	With work feed speed regulator
Y10T 83/4743	. . . . .	With means to vary cyclically speed of work
Y10T 83/4746	. . . . .	Spring return of tool in counterfly direction
Y10T 83/4749	. . . . .	Tool mounted on oscillating standard
Y10T 83/4751	. . . . .	Both tools of couple on single standard
Y10T 83/4754	. . . . .	One tool swings out of work path on return stroke
Y10T 83/4757	. . . . .	Tool carrier shuttles rectilinearly parallel to direction of work feed
Y10T 83/476	. . . . .	Including means to secure work to carrier
Y10T 83/4763	. . . . .	Both members of cutting pair on same carrier
Y10T 83/4766	. . . . .	Orbital motion of cutting blade
Y10T 83/4769	. . . . .	Work feeder mounted on tool support
Y10T 83/4772	. . . . .	Gripper-type feeder

Y10T 83/4775	. . .	Tool speed varied within each orbital cycle
Y10T 83/4778	. . .	Work feed gripper carried on endless belt
Y10T 83/478	. . .	Endless belt or chain tool carrier
Y10T 83/4783	. . .	Constantly oriented tool with arcuate cutting path
Y10T 83/4786	. . . .	Cutting couple type
Y10T 83/4789	. . .	Rotatable disc-type tool on orbiting axis
Y10T 83/4792	. . . .	Idling disc
Y10T 83/4795	. . .	Rotary tool
Y10T 83/4798	. . . .	Segmented disc slitting or slotting tool
Y10T 83/4801	. . . .	With undulant cutting edge [e.g., "pinking" tool]
Y10T 83/4804	. . . .	Single tool action drive
Y10T 83/4807	. . . . .	With one-revolution drive
Y10T 83/4809	. . . .	With loop former preceding tool
Y10T 83/4812	. . . .	Compound movement of tool during tool cycle
Y10T 83/4815	. . . . .	Axial reciprocation of tool
Y10T 83/4818	. . . .	Interconnected work feeder and tool driver
Y10T 83/4821	. . . .	Side cutting helical blade
Y10T 83/4824	. . . .	With means to cause progressive transverse cutting
Y10T 83/4827	. . . . .	With helical cutter blade
Y10T 83/483	. . . .	With cooperating rotary cutter or backup
Y10T 83/4833	. . . . .	Cooperating tool axes adjustable relative to each other
Y10T 83/4836	. . . . .	With radial overlap of the cutting members
Y10T 83/4838	. . . . .	With anvil backup
Y10T 83/4841	. . . . .	With resilient anvil surface
Y10T 83/4844	. . . . .	Resiliently urged cutter or anvil member
Y10T 83/4847	. . . .	With cooperating stationary tool
Y10T 83/485	. .	Cutter with timed stroke relative to moving work
Y10T 83/487	. .	Work swings about progressively cutting tool during tool stroke
Y10T 83/489	. .	Tool actuated by movable work support
Y10T 83/49	. .	Traveling cutter
Y10T 83/492	. .	With means to vary timing of tool feed
Y10T 83/494	. .	Uniform periodic tool actuation
Y10T 83/496	. . .	With periodic lateral feed of tool or work
Y10T 83/498	. . .	With plural tool stations
Y10T 83/50	. . .	Reciprocating tool
Y10T 83/501	. . .	With plural tools on a single tool support
Y10T 83/503	. .	With plural tool stations
Y10T 83/505	. .	Operation controlled by means responsive to product
Y10T 83/515	. .	Actuation of tool controlled
Y10T 83/525	. .	Operation controlled by detector means responsive to work

- Y10T 83/527 . . With means to control work-responsive signal system
- Y10T 83/528 . . . To delay response to work-senser
- Y10T 83/53 . . . To change length of product
- Y10T 83/531 . . With plural work-sensing means
- Y10T 83/533 . . With photo-electric work-sensing means
- Y10T 83/535 . . Release of interlock controlled
- Y10T 83/536 . . Movement of work controlled
- Y10T 83/538 . . Positioning of tool controlled
- Y10T 83/54 . . Actuation of tool controlled by work-driven means to measure work length
- Y10T 83/541 . . Actuation of tool controlled in response to work-sensing means
- Y10T 83/543 . . . Sensing means responsive to work indicium or irregularity
- Y10T 83/544 . . . With trip-switch in work-sensing mechanism
- Y10T 83/546 . Interrelated tool actuating and work guide moving means
- Y10T 83/566 . Interrelated tool actuating means and means to actuate work immobilizer
- Y10T 83/5669 . . Work clamp
- Y10T 83/5678 . . . Tool deflected by guide on tightened clamp
- Y10T 83/5687 With means to control clamping force
- Y10T 83/5696 Clamp driven by reaction from tool force
- Y10T 83/5705 With means providing for plural steps in clamping stroke
- Y10T 83/5715 With sequencing means
- Y10T 83/5724 With provision for manual control of clamp
- Y10T 83/5733 Tool or tool support on movable clamp jaw
- Y10T 83/5742 Clamp moved by direct impact of tool or tool support
- Y10T 83/5751 Clamp retracted by impact of tool or tool support
- Y10T 83/576 Clamp actuating means driven by tool or tool support
- Y10T 83/5769 Clamp yieldably driven by tool or tool support
- Y10T 83/5778 With resilient drive element
- Y10T 83/5787 Clamp driven by yieldable means
- Y10T 83/5796 Drive means is resilient
- Y10T 83/5805 Fluid pressure yieldable drive means
- Y10T 83/5815 . . Work-stop abutment
- Y10T 83/5824 Oppositely effective abutments
- Y10T 83/5833 With cyclic means to alter work-stopping position
- Y10T 83/5842 Stop partakes of tool motion
- Y10T 83/5851 Carried by tool or tool support
- Y10T 83/586 . . Interrelated tool actuating means and means to actuate work-mover stop
- Y10T 83/606 . . Interrelated tool actuating means and guard means
- Y10T 83/613 . . Work guard
- Y10T 83/619 . . Cutter guide slot closer

- Y10T 83/626 . Operation of member controlled by means responsive to position of element remote from member [e.g., interlock]
- Y10T 83/637 . . With means to initiate operation of member
- Y10T 83/647 . With means to convey work relative to tool station
- Y10T 83/6472 . . By fluid current
- Y10T 83/6473 . . Centrifugal feed to tangential tool [e.g., "Beria" type]
- Y10T 83/6475 . . With means to regulate work-feed speed
- Y10T 83/6476 . . Including means to move work from one tool station to another
- Y10T 83/6478 . . . Tool stations angularly related
- Y10T 83/648 Work manipulated between tool stations
- Y10T 83/6481 With static tool
- Y10T 83/6483 . . . Tool stations staggered relative to one another
- Y10T 83/6484 . . . Punch or die station
- Y10T 83/6486 . . . Notcher or pinker station
- Y10T 83/6488 . . . Work reciprocated past double-edged knife
- Y10T 83/6489 . . . Slitter station
- Y10T 83/6491 And transverse cutter station
- Y10T 83/6492 . . Plural passes of diminishing work piece through tool station
- Y10T 83/6494 . . . Work alternately, angularly re-oriented relative to tool station
- Y10T 83/6496 By additional means to engage work and orient it relative to tool station
- Y10T 83/6497 By roller or roll-like element
- Y10T 83/6499 . . . Work rectilinearly reciprocated through tool station
- Y10T 83/65 With means to cause or permit angular re-orientation of work about axis parallel to plane of cut
- Y10T 83/6502 By endless member having work-engaging teeth
- Y10T 83/6504 By member having work-engaging tooth
- Y10T 83/6505 Including plural work-engaging teeth
- Y10T 83/6507 Fluid operated
- Y10T 83/6508 With means to cause movement of work transversely toward plane of cut
- Y10T 83/651 By means to cause movement toward and away from plane of cut
- Y10T 83/6512 Actuated by movement of a member on reciprocating means
- Y10T 83/6513 Actuated by passive means which is external to reciprocating means
- Y10T 83/6515 By means to define increment of movement toward plane of cut
- Y10T 83/6516 Interrelated with movement of reciprocating means
- Y10T 83/6518 By pusher mechanism
- Y10T 83/652 With additional work holding or positioning means
- Y10T 83/6521 Work holding means includes actuator
- Y10T 83/6523 Including plural, simultaneously acting pusher elements

Y10T 83/6524	. . . . .	Independently adjustable
Y10T 83/6526	. . . . .	With additional means to retract elements
Y10T 83/6528	. . . . .	Power derived from movement of reciprocating means
Y10T 83/6529	. . . . .	Power derived from fluid pressure means
Y10T 83/6531	. . . . .	Movement by screw means
Y10T 83/6532	. . . . .	Movement by rack and pinion or pawl
Y10T 83/6534	. . . . .	With handle
Y10T 83/6536	. . . . .	By carriage
Y10T 83/6537	. . . . .	By cable or belt drive
Y10T 83/6539	. . . . .	With means for transverse positioning of work on a moving conveyor
Y10T 83/654	. . . . .	With work-constraining means on work conveyor [i.e., "work-carrier"]
Y10T 83/6542	. . . . .	Plural means to constrain plural work pieces
Y10T 83/6544	. . . . .	End of work protrudes through aperture in carrier
Y10T 83/6545	. . . . .	With means to guide work-carrier in nonrectilinear path
Y10T 83/6547	. . . . .	About axis fixed relative to tool station
Y10T 83/6548	. . . . .	Infeed
Y10T 83/655	. . . . .	About vertical axis
Y10T 83/6552	. . . . .	Cut normal to axis
Y10T 83/6553	. . . . .	Work-guide tube
Y10T 83/6555	. . . . .	Cut normal to axis
Y10T 83/6556	. . . . .	Oscillating work-carrier
Y10T 83/6558	. . . . .	Multiple cutters
Y10T 83/656	. . . . .	Coaxial rotary cutters
Y10T 83/6561	. . . . .	Work stationary during cut
Y10T 83/6563	. . . . .	With means to orient or position work carrier relative to tool station
Y10T 83/6564	. . . . .	By pattern or templet
Y10T 83/6566	. . . . .	By indexing means
Y10T 83/6568	. . . . .	With additional work-locating means on work-carrier
Y10T 83/6569	. . . . .	With means to stop work conveyor
Y10T 83/6571	. . . . .	With means to store work articles
Y10T 83/6572	. . . . .	With additional means to engage work and orient it relative to tool station
Y10T 83/6574	. . . . .	By work-stopping abutment
Y10T 83/6576	. . . . .	By opposed lateral guide means
Y10T 83/6577	. . . . .	With means to adjust additional means
Y10T 83/6579	. . . . .	With means to press work to work-carrier
Y10T 83/658	. . . . .	With projections on work-carrier [e.g., pin wheel]
Y10T 83/6582	. . . . .	Tool between tandem arranged work carrying means
Y10T 83/6584	. . . . .	Cut made parallel to direction of and during work movement
Y10T 83/6585	. . . . .	Including nonconcurrently acting tool
Y10T 83/6587	. . . . .	Including plural, laterally spaced tools

Y10T 83/6588	. . . . Tools mounted on common tool support
Y10T 83/659	. . . . . Tools axially shiftable on support
Y10T 83/6592	. . . Interrelated work-conveying and tool-moving means
Y10T 83/6593	. . . . With reciprocating tool [e.g., "jigsaw" type]
Y10T 83/6595	. . . . With means to move tool laterally of feed direction during cutting
Y10T 83/6596	. . . . With means to effect difference between work speed and tool speed
Y10T 83/6598	. . . . Tool co-axial with work-conveying means
Y10T 83/66	. . . With means to press work to tool
Y10T 83/6601	. . . Bevel cutting tool
Y10T 83/6603	. . . Tool shiftable relative to work-conveying means
Y10T 83/6604	. . . Tool in contact with surface of work-conveying means
Y10T 83/6606	. . . Tool between laterally spaced work-conveying means
Y10T 83/6608	. . . By rectilinearly moving work carriage
Y10T 83/6609	. . . . Angularly adjustable
Y10T 83/6611	. . . . . Having positive adjustment stop; e.g., link
Y10T 83/6612	. . . . . Having position indicating means
Y10T 83/6614	. . . . Pusher engaging rear surface of work
Y10T 83/6616	. . . . . Having means to actuate pusher
Y10T 83/6617	. . . . . . Hydraulic or pneumatic means
Y10T 83/6619	. . . . . . Gear or pulley actuated pusher
Y10T 83/662	. . . . . . Lever, cam, or link actuated pusher
Y10T 83/6622	. . . . . Having means to actuate carriage
Y10T 83/6624	. . . . . . Hydraulic or pneumatic means
Y10T 83/6625	. . . . . . Gear or pulley
Y10T 83/6627	. . . . . . Adapted to place tension on flacid member
Y10T 83/6628	. . . . . . Lever, cam, or link means
Y10T 83/663	. . . . On or attached to vehicle
Y10T 83/6632	. . . . Supported for movement at one side of tool only
Y10T 83/6633	. . . By work moving flexible chain or conveyor
Y10T 83/6635	. . . By feed roller
Y10T 83/6636	. . . . Pinch rollers
Y10T 83/6638	. . . Unattached manual work pusher
Y10T 83/664	. . Roller
Y10T 83/6641	. . . Plural independent rollers for feed of plural distinct work
Y10T 83/6643	. . . Shaped to conform to work
Y10T 83/6644	. . . With work-supplying reel
Y10T 83/6646	. . . . And provision for selecting feed length
Y10T 83/6648	. . . Continuous conveying during , cutting; e.g., straw cutting
Y10T 83/6649	. . . Supporting work at cutting station
Y10T 83/6651	. . . . Comprising part of cutting station

- Y10T 83/6652 . . . Tool and feed roller actuated by common handle
- Y10T 83/6654 . . . Tool and roller on common movable support
- Y10T 83/6656 . . Rectilinear movement only
- Y10T 83/6657 . . . Tool opposing pusher
- Y10T 83/6659 Hydraulically or pneumatically actuated
- Y10T 83/666 Screw actuated
- Y10T 83/6662 Gear or pulley actuated
- Y10T 83/6664 Lever, cam, or link actuated
- Y10T 83/6665 Spring or gravity urged
- Y10T 83/6667 . . Work carrier rotates about axis fixed relative to tool station
- Y10T 83/6668 . . Interrelated work-feeding means and tool-moving means
- Y10T 83/667 . Tool carrier or guide affixed to work during cutting
- Y10T 83/674 . . By flexible work-engaging member
- Y10T 83/68 . . Entirely work supported
- Y10T 83/687 . By tool reciprocable along elongated edge
- Y10T 83/6875 . . With means permitting tool to be rotatably adjusted about its cutting edge during cutting
- Y10T 83/688 . . With dynamic balancing or shock absorbing means
- Y10T 83/6885 . . With tool of another type
- Y10T 83/689 . . With means to change to other type tool
- Y10T 83/6895 . . Plural reciprocable tools
- Y10T 83/69 . . Stored energy furnishes drive in one direction
- Y10T 83/6905 . . With tool in-feed
- Y10T 83/691 . . . And auxiliary means for promoting or retarding tool in-feed
- Y10T 83/6915 By yieldable means
- Y10T 83/692 And means to vary tool in-feed speed
- Y10T 83/6925 With interrelated tool actuating and in-feed means
- Y10T 83/693 . . . Of rectilinearly reciprocating tool
- Y10T 83/6935 With in-feed by pivoting carrier
- Y10T 83/694 . . . And means to prevent tool in-feed
- Y10T 83/6945 . . . With passive means to guide tool directly
- Y10T 83/695 By plural opposed guide surfaces
- Y10T 83/6955 Having relative adjustment between guide surfaces
- Y10T 83/696 With relative adjustment between guide and work or work-support
- Y10T 83/6965 By or with additional movable work-support portion
- Y10T 83/697 By rotation about an axis parallel to the work-support surface
- Y10T 83/6975 By rotation about an axis perpendicular to the work-support surface
- Y10T 83/698 . . . Including means to cause nonrectilinear tool infeed
- Y10T 83/6985 . . . Of arcuately oscillating tool

Y10T 83/699	. . . Of tool carrier on single moving pivot
Y10T 83/6995	. . . . Pivot moves in closed loop
Y10T 83/70	. . . . Pivot moves to and fro in arcuate path
Y10T 83/7005	. . . . . Axis of arcuate path moves during cutting
Y10T 83/701	. . . . Pivot moves to and fro in rectilinear path
Y10T 83/7015	. . Having uniplanar compound motion
Y10T 83/702	. . . By plural arcuately oscillating carrier
Y10T 83/7025	. . . Constantly oriented tool travelling in orbit
Y10T 83/703	. . . Tool rocks cutting reciprocations
Y10T 83/7035	. . . . One tool reciprocates along fixed guide element
Y10T 83/704	. . With work-support and means to vary relationship between tool and work support
Y10T 83/7045	. . Arcuately oscillating tool carried on single pivot
Y10T 83/705	. . With means to support tool at opposite ends
Y10T 83/7055	. . . And apply drive force to both ends of tool
Y10T 83/706	. . . . By flexible drive means
Y10T 83/7065	. . . . By reciprocating rigid support
Y10T 83/707	. By endless band or chain knife
Y10T 83/7076	. . With programming means
Y10T 83/7083	. . With cutter other than endlessly orbiting type
Y10T 83/7089	. . Including contiguous oppositely moving knife portions
Y10T 83/7095	. . With means to change to non-endlessly orbiting cutter
Y10T 83/7101	. . With tool in-feed
Y10T 83/7108	. . . Including ground-traversing vehicle
Y10T 83/7114	. . . Including means to permit arcuate in-feed motion
Y10T 83/712	. . . . Including means to relocate path of in-feed motion
Y10T 83/7126	. . . . . Angular relative previous path
Y10T 83/7133	. . . By gravity
Y10T 83/7139	. . . . With fluid in-feed regulating means
Y10T 83/7145	. . . By motor-driven mechanism
Y10T 83/7151	. . With scale or indicator
Y10T 83/7158	. . Including plural cutting zones
Y10T 83/7164	. . . With adjustment of separation between zones
Y10T 83/717	. . . . By lever means
Y10T 83/7176	. . . . By screw-threaded means
Y10T 83/7183	. . . Including "figure-8" band
Y10T 83/7189	. . . Comprising plural bands
Y10T 83/7195	. . Including means to adjust relationship between band and work-support surface
Y10T 83/7201	. . . By varying angle between band and work-support surface

Y10T 83/7208	. . . . By tilting band carrier
Y10T 83/7214	. . . . . About point of intersection of cutting span and work-support surface
Y10T 83/722	. . . By varying distance between band and work-support surface
Y10T 83/7226	. . With means to guard the tension
Y10T 83/7233	. . . Including means to retard undriven pulley or sprocket
Y10T 83/7239	. . . With means to vary distance between pulley or sprocket axes
Y10T 83/7245	. . . . And angular relationship of axes
Y10T 83/7251	. . . . Including means to yieldably bias pulley
Y10T 83/7258	. . . . . By fluid means
Y10T 83/7264	. . With special blade guide means
Y10T 83/727	. With means to guide moving work
Y10T 83/728	. . In pivotal or arcuate movement
Y10T 83/73	. . Guide fixed to or integral with stationary tool element
Y10T 83/731	. . . Tool element cooperates with a second tool
Y10T 83/732	. . With guard
Y10T 83/734	. . With attachment or operative connection to tool carrier
Y10T 83/735	. . With attachment or operative connection to passive tool guide
Y10T 83/736	. . Guide cooperates with template or straight edge secured to work
Y10T 83/738	. . Curved or deflecting guide
Y10T 83/739	. . Positively confines or otherwise determines path of work
Y10T 83/74	. . Adapted to permit maneuvering of work at tool zone
Y10T 83/741	. . With movable or yieldable guide element
Y10T 83/743	. . . Opposed to work-supporting surface
Y10T 83/744	. . Plural guide elements
Y10T 83/745	. . . Opposed
Y10T 83/747	. . Opposed to work-supporting surface
Y10T 83/748	. With work immobilizer
Y10T 83/7487	. . Means to clamp work
Y10T 83/7493	. . . Combined with, peculiarly related to, other element
Y10T 83/75	. . . . With or to tool guide
Y10T 83/7507	. . . . Guide for traveling cutter
Y10T 83/7513	. . . . Tool or tool support on movable clamp jaw
Y10T 83/752	. . . With means providing for plural steps in clamping stroke
Y10T 83/7527	. . . With equalizer or self-aligning jaw
Y10T 83/7533	. . . With biasing or counterbalancing means
Y10T 83/754	. . . Clamp driven by yieldable means
Y10T 83/7547	. . . Liquid pressure actuating means
Y10T 83/7553	. . . Including means to retain clamp jaw in position
Y10T 83/756	. . . Self-locking drive means

Y10T 83/7567	. . .	Manually actuated drive means
Y10T 83/7573	. . .	Including clamping face of specific structure
Y10T 83/758	. . .	With means to adjust clamp position or stroke
Y10T 83/7587	. .	Gapped work-constrainer
Y10T 83/7593	. .	Work-stop abutment
Y10T 83/76	. . .	With scale or indicator
Y10T 83/7607	. . .	Normal to plane of cut
Y10T 83/7613	. . . .	Adjustable
Y10T 83/762	. . . . .	Angularly relative to plane of cut; e.g., miter
Y10T 83/7627	. . . .	With traversing cutter guide; e.g., cut-off saw
Y10T 83/7633	. . .	Collapsible
Y10T 83/764	. . .	Retractable
Y10T 83/7647	. . .	Adjustable
Y10T 83/7653	. . . .	Having curved cutting edge to make arcuate cut, plural nonaligned intersecting cutting edges, or spaced punches
Y10T 83/766	. . . . .	Spaced edges
Y10T 83/7667	. . .	Having curved cutting edge to make arcuate cut, plural nonaligned intersecting cutting edges, or spaced punches
Y10T 83/7673	. . . .	Spaced edges
Y10T 83/768	. .	Rotatable disc tool pair or tool and carrier
Y10T 83/7684	. .	With means to support work relative to tool[s]
Y10T 83/7688	. . .	Plural tool elements successively actuated at same station
Y10T 83/7693	. . .	Tool moved relative to work-support during cutting
Y10T 83/7697	. . . .	Tool angularly adjustable relative to work-support
Y10T 83/7701	. . .	Supporting surface and tool axis angularly related
Y10T 83/7705	. . . .	Adjustable angular relationship
Y10T 83/7709	. . .	Unidirectionally movable work support
Y10T 83/7713	. . . .	With opposed work-presser
Y10T 83/7718	. . . . .	Presser co-axial with tool
Y10T 83/7722	. . .	Support and tool relatively adjustable
Y10T 83/7726	. . . .	By movement of the tool
Y10T 83/773	. . .	Work-support includes passageway for tool [e.g., slotted table]
Y10T 83/7734	. .	With guard for tool
Y10T 83/7738	. .	Optional tool pairs alternatively operative
Y10T 83/7743	. . .	One element of tool pairs common to all pairs
Y10T 83/7747	. .	With means to permit replacement of tool
Y10T 83/7751	. .	Means to separate elements of tool pair
Y10T 83/7755	. .	Carrier for rotatable tool movable during cutting
Y10T 83/7759	. . .	Unicyclic movement
Y10T 83/7763	. . .	Tool carrier reciprocable rectilinearly

Y10T 83/7768	. . . . With means to adjust path of reciprocation
Y10T 83/7772	. . . . . Angular relative to previous path
Y10T 83/7776	. . . . With means to reciprocate carrier
Y10T 83/778	. . . . . And means to rotate tool
Y10T 83/7784	. . . . With means to rotate tool
Y10T 83/7788	. . . Tool carrier oscillated or rotated
Y10T 83/7793	. . Means to rotate or oscillate tool
Y10T 83/7797	. . . Including means to rotate both elements of tool pair
Y10T 83/7801	. . . . Including means to rotate both elements at different speeds
Y10T 83/7805	. . . . And means to change speed of rotation
Y10T 83/7809	. . Tool pair comprises rotatable tools
Y10T 83/7813	. . . Tool pair elements angularly related
Y10T 83/7818	. . . . Elements of tool pair angularly adjustable relative to each other
Y10T 83/7822	. . . Tool pair axially shiftable
Y10T 83/7826	. . . . With shifting mechanism for at least one element of tool pair
Y10T 83/783	. . . Tool pair comprises contacting overlapped discs
Y10T 83/7834	. . . . With means to effect axial pressure on pair
Y10T 83/7838	. . . . . With means to change axial pressure
Y10T 83/7843	. . . . With means to change overlap of discs
Y10T 83/7847	. . . Tool element axially shiftable
Y10T 83/7851	. . . Tool pair comprises disc and cylindrical anvil
Y10T 83/7855	. . . . With adjustable means to urge tool elements together
Y10T 83/7859	. . . Elements of tool pair adjustably spaced
Y10T 83/7863	. . Tool pair comprises rotatable tool and nonrotatable tool
Y10T 83/7868	. . Tool element selectively operative
Y10T 83/7872	. . Tool element mounted for adjustment
Y10T 83/7876	. . . Plural, axially spaced tool elements
Y10T 83/788	. Tool pair comprises rotatable anvil and fixed-type tool
Y10T 83/793	. . Anvil has motion in addition to rotation [i.e., traveling anvil]
Y10T 83/798	. . . Additional motion is along fixed arcuate path
Y10T 83/803	. . . With plural anvils
Y10T 83/808	. Two tool pairs, driver for one pair moves relative to driver for other pair
Y10T 83/811	. . One tool support acts as driver for other
Y10T 83/814	. . . Punch and shear
Y10T 83/817	. . With variable spacing between tool pairs
Y10T 83/819	. . . With intermediate work support
Y10T 83/822	. . Punch and shear
Y10T 83/825	. . Successively acting
Y10T 83/828	. With illuminating or viewing means for work
Y10T 83/839	. . Mirror or lens

Y10T 83/849	. With signal, scale, or indicator
Y10T 83/85	. . Signal; e.g., alarm
Y10T 83/851	. . Indicator comprising work or product
Y10T 83/852	. . Responsive to force
Y10T 83/853	. . Indicates tool position
Y10T 83/855	. . . Relative to another element
Y10T 83/856	. . . . To work-engaging member
Y10T 83/857	. . . . . Calibrated scale or indicator
Y10T 83/858	. . . . . Indicates dimension of work being cut
Y10T 83/859	. . . . . Dynamic indicator
Y10T 83/86	. . . . To another tool assembly
Y10T 83/861	. . . . To cooperating tool
Y10T 83/862	. . . . To another component of tool assembly
Y10T 83/863	. . . . Adjustable guide for traversing tool; e.g., radial saw guide or miter saw guide
Y10T 83/865	. . Indicates work characteristic
Y10T 83/866	. . Indicates wear
Y10T 83/867	. . Bubble level
Y10T 83/868	. . Counter
Y10T 83/869	. Means to drive or to guide tool
Y10T 83/8691	. . Unicyclic
Y10T 83/8693	. . . With adjustable stopping point or tool
Y10T 83/8694	. . . With brake or blocking means
Y10T 83/8696	. . Means to change datum plane of tool or tool presser stroke
Y10T 83/8697	. . . For disabling of continuously actuated cutter
Y10T 83/8699	. . . With adjustable stop
Y10T 83/87	. . . By varying length of tool stroke
Y10T 83/8702	. . Clicker die press
Y10T 83/8703	. . . With die handling attachment
Y10T 83/8704	. . . With reciprocating presser
Y10T 83/8706	. . . . Laterally movable to selective operative positions
Y10T 83/8707	. . . . . Pivotal or revolving only
Y10T 83/8709	. . . . . With means to impart, limit, or control pivotal motion of presser
Y10T 83/871	. . . . . Interrelated with presser reciprocating means
Y10T 83/8712	. . . . . With means to mount presser for oscillation about column
Y10T 83/8713	. . . . With adjustable bed block
Y10T 83/8714	. . . . Including presser member reinforcing, or flexure compensating, means
Y10T 83/8716	. . . . With manually actuated control apparatus for reciprocation of presser member
Y10T 83/8717	. . By deforming resilient tool or tool support

Y10T 83/8719	. . With transmission yieldable on overload
Y10T 83/872	. . With guard means
Y10T 83/8722	. . . Static
Y10T 83/8723	. . . . Adjustable
Y10T 83/8725	. . Including movable, tool protecting, cushioning sheet
Y10T 83/8726	. . Single tool with plural selective driving means
Y10T 83/8727	. . Plural tools selectively engageable with single drive
Y10T 83/8729	. . . Predetermined sequence of selection
Y10T 83/873	. . . . Of paired tools
Y10T 83/8732	. . . Turret of tools
Y10T 83/8733	. . Tool movable to cooperate selectively with one of a plurality of mating tools
Y10T 83/8735	. . With means providing for plural steps in tool stroke
Y10T 83/8736	. . Sequential cutting motions
Y10T 83/8737	. . With tool positioning means synchronized with cutting stroke
Y10T 83/8739	. . . Anvil moves into and out of operative position
Y10T 83/874	. . . Straight line positioning
Y10T 83/8742	. . Tool pair positionable as a unit
Y10T 83/8743	. . . Straight line positioning
Y10T 83/8745	. . Tool and anvil relatively positionable
Y10T 83/8746	. . . Straight line
Y10T 83/8748	. . Tool displaceable to inactive position [e.g., for work loading]
Y10T 83/8749	. . . By pivotal motion
Y10T 83/875	. . With templet surface following tool
Y10T 83/8752	. . Tool moves work to and against cooperating tool
Y10T 83/8753	. . . With means to clamp or bind work to moving tool
Y10T 83/8755	. . . One tool resiliently mounted or biased
Y10T 83/8756	. . . Work forced through tool aperture or between spaced cooperating tools
Y10T 83/8758	. . . Manually actuated work-moving tool
Y10T 83/8759	. . With means to connect or disconnect tool and its drive
Y10T 83/8761	. . . Continuously moving drive means [e.g., "gag"]
Y10T 83/8762	. . . . Hand actuated connecting means
Y10T 83/8763	. . Convertible from tool path to another or from implement to machine
Y10T 83/8765	. . Magnet- or solenoid-actuated tool
Y10T 83/8766	. . . Tool movement modifies actuating circuit
Y10T 83/8768	. . . Solenoid core is tool or tool support
Y10T 83/8769	. . Cutting tool operative in opposite directions of travel
Y10T 83/8771	. . Motion direction of tool influenced by resistance of work
Y10T 83/8772	. . One tool edge of tool pair encompasses work [e.g., wire cutter]
Y10T 83/8773	. . Bevel or miter cut
Y10T 83/8775	. . With tool tensioning means

Y10T 83/8776	. . . Constantly urged tool or tool support [e.g., spring biased]
Y10T 83/8778	. . . . Ledger blade
Y10T 83/8779	. . . . Oscillating tool urged axially
Y10T 83/8781	. . . . . And urged about pivotal axis
Y10T 83/8782	. . . . Stored energy furnishes cutting force
Y10T 83/8784	. . . . . With reset
Y10T 83/8785	. . . . Through return [noncutting] stroke
Y10T 83/8786	. . . . . Oscillating tool
Y10T 83/8788	. . . Tool return mechanism separate from tool advance mechanism
Y10T 83/8789	. . . With simple revolving motion only
Y10T 83/8791	. . . . Tool mounted on radial face of rotor
Y10T 83/8792	. . . . Variable speed during one revolution [e.g., intermittent]
Y10T 83/8794	. . . . Revolving tool moves through recess in work holder or cooperating tool
Y10T 83/8795	. . . . . Progressively cutting
Y10T 83/8796	. . . . Progressively cutting
Y10T 83/8798	. . . With simple oscillating motion only
Y10T 83/8799	. . . . Plural tool pairs
Y10T 83/8801	. . . . . Plural tools on single oscillating arm [i.e., tool holder]
Y10T 83/8802	. . . . And means to move cooperating cutter member
Y10T 83/8804	. . . . Tool driver movable relative to tool support
Y10T 83/8805	. . . . . Cam or eccentric revolving about fixed axis
Y10T 83/8807	. . . . . Gear or ratchet pawl drives toothed tool support
Y10T 83/8808	. . . . . Toggle links, one link pivoted to tool support
Y10T 83/8809	. . . . . Fixed axis lever
Y10T 83/8811	. . . . . Adjustable mechanical advantage
Y10T 83/8812	. . . . Cutting edge in radial plane
Y10T 83/8814	. . . . . Adjustable
Y10T 83/8815	. . . . . With guide means for the cutting member
Y10T 83/8817	. . . . Axially extending cutting edge
Y10T 83/8818	. . . . . Axially progressing cut
Y10T 83/882	. . . . . Adjustable
Y10T 83/8821	. . . With simple rectilinear reciprocating motion only
Y10T 83/8822	. . . . Edge-to-edge of sheet or web [e.g., traveling cutter]
Y10T 83/8824	. . . . With provision for dynamic balance
Y10T 83/8825	. . . . With lost motion in tool drive
Y10T 83/8827	. . . . Means to vary force on, or speed of, tool during stroke
Y10T 83/8828	. . . . Plural tools with same drive means
Y10T 83/883	. . . . . Tools positioned by template
Y10T 83/8831	. . . . . Plural distinct cutting edges on same support
Y10T 83/8832	. . . . . Concentrically mounted

Y10T 83/8834	. . . . . Successively acting
Y10T 83/8835	. . . And means to move cooperating cutting member
Y10T 83/8837	. . . With application of force to opposite ends of tool supporting crosshead
Y10T 83/8838	. . . . By relatively movable fixed axis levers
Y10T 83/884	. . . . By connecting rod articulated with tool support
Y10T 83/8841	. . . Tool driver movable relative to tool support
Y10T 83/8843	. . . . Cam or eccentric revolving about fixed axis
Y10T 83/8844	. . . . Gear actuated tool support
Y10T 83/8845	. . . . Toggle links, one link pivoted to tool support
Y10T 83/8847	. . . . Screw actuated tool support
Y10T 83/8848	. . . . Connecting rod articulated with tool support
Y10T 83/885	. . . . Fixed axis lever
Y10T 83/8851	. . . . . Adjustable mechanical advantage
Y10T 83/8853	. . . . Including details of guide for tool or tool support
Y10T 83/8854	. . . Progressively cutting
Y10T 83/8855	. . . With spaced guide pins [e.g., die set leader pins]
Y10T 83/8857	. . . With inclined guides
Y10T 83/8858	. . . Fluid pressure actuated
Y10T 83/886	. . . . Utilizing fluid amplifier
Y10T 83/8861	. . . . Diaphragm
Y10T 83/8863	. . . . Explosive fluid
Y10T 83/8864	. . . . Plural cylinders
Y10T 83/8866	. . . . Offset cutter
Y10T 83/8867	. . . With means to adjust tool position on tool holder
Y10T 83/8868	. . . . Adjustably mounted cooperating tool
Y10T 83/887	. . Parallel draw-cut [e.g., translatory]
Y10T 83/8871	. . . Link suspension
Y10T 83/8873	. . Straight line motion combined with tilting in plane of stroke
Y10T 83/8874	. . Uniplanar compound motion
Y10T 83/8876	. . . Reciprocating plus work approach [e.g., saw type]
Y10T 83/8877	. . . With gyratory drive
Y10T 83/8878	. . Guide
Y10T 83/888	. . . With nonrigidly positioned member
Y10T 83/8881	. . . With anti-friction means
Y10T 83/8883	. . . . Roller with peripheral flange or groove
Y10T 83/8884	. . . . Disc
Y10T 83/8886	. . . With means to vary space between opposed members
Y10T 83/8887	. . . . By rectilinear movement of member
Y10T 83/8889	. . . With means to adjust position
Y10T 83/889	. Tool with either work holder or means to hold work supply

Y10T 83/896	. . Rotatable wound package supply
Y10T 83/902	. . . Plural supply sources
Y10T 83/909	. Cutter assemblage or cutter element therefor [e.g., chain saw chain]
Y10T 83/913	. . With means permitting removal of cutter element
Y10T 83/917	. . Having diverse cutting elements
Y10T 83/921	. . . And noncutting depth gauge
Y10T 83/925	. . Having noncutting depth gauge
Y10T 83/929	. Tool or tool with support
Y10T 83/9292	. . Wire tool
Y10T 83/9295	. . Work supported tool [e.g., clicker die]
Y10T 83/9297	. . . With product ejection facilitator
Y10T 83/93	. . . With tool manipulating portion
Y10T 83/9302	. . . With tool positioning abutment
Y10T 83/9304	. . . To sever article from work and cut within article
Y10T 83/9307	. . . With tool contour adjusting means
Y10T 83/9309	. . Anvil
Y10T 83/9312	. . . Rotatable type
Y10T 83/9314	. . Pointed perforators
Y10T 83/9317	. . Endless band or belt type
Y10T 83/9319	. . Toothed blade or tooth therefor
Y10T 83/9321	. . . With means to vary tooth position
Y10T 83/9324	. . . With additional cutting means
Y10T 83/9326	. . . Plural separable sections
Y10T 83/9329	. . . . Tooth separable from blade
Y10T 83/9331	. . . . . By independent connecting element
Y10T 83/9333	. . . . . Transversely movable
Y10T 83/9336	. . . . . Arcuately movable
Y10T 83/9338	. . . . . . With additional element to prevent movement of connecting element
Y10T 83/9341	. . . . . Rectilinearly movable
Y10T 83/9343	. . . . . By deformation
Y10T 83/9346	. . . Uniformly varying teeth or tooth spacing
Y10T 83/9348	. . . Undulating tooth arrangement
Y10T 83/935	. . . Plural tooth groups
Y10T 83/9353	. . . . Including raker tooth group
Y10T 83/9355	. . . . Including intermediate raker tooth
Y10T 83/9358	. . . Series of dissimilar teeth
Y10T 83/936	. . . Series of allochiral teeth
Y10T 83/9362	. . . Teeth having transversely curved cutting edge
Y10T 83/9365	. . . Teeth having cutting edge parallel to blade surface

Y10T 83/9367	. . .	Teeth having cutting edge perpendicular to blade surface
Y10T 83/937	. .	Tool mounted by and between spaced arms
Y10T 83/9372	. .	Rotatable type
Y10T 83/9374	. . .	With spacer interposed between shaft-mounted tools
Y10T 83/9377	. . .	Mounting of tool about rod-type shaft
Y10T 83/9379	. . . .	At end of shaft
Y10T 83/9382	. . .	Punching plus nonpunching tool
Y10T 83/9384	. . .	Notching plus nonnotching tool
Y10T 83/9387	. . .	Punching tool
Y10T 83/9389	. . . .	Shear type
Y10T 83/9391	. . .	Notching tool
Y10T 83/9394	. . .	Helical tool
Y10T 83/9396	. . .	Shear type
Y10T 83/9399	. . . .	Cutting edge wholly parallel to axis of rotation
Y10T 83/9401	. . . .	Cutting edge wholly normal to axis of rotation
Y10T 83/9403	. . .	Disc type
Y10T 83/9406	. . .	Radially adjustable tool
Y10T 83/9408	. . .	Spaced cut forming tool
Y10T 83/9411	. .	Cutting couple type
Y10T 83/9413	. . .	Spiral type cutter
Y10T 83/9416	. . .	To punch and cut punched article
Y10T 83/9418	. . .	Punching plus nonpunching tool
Y10T 83/942	. . .	Notching plus nonnotching tool
Y10T 83/9423	. . .	Punching tool
Y10T 83/9425	. . . .	Tool pair
Y10T 83/9428	. . . .	Shear-type male tool
Y10T 83/943	. . . . .	Multiple punchings
Y10T 83/9432	. . . . .	Plural spaced successively operative shearing portions
Y10T 83/9435	. . . . .	Progressive cutting
Y10T 83/9437	. . . .	Shear-type female tool
Y10T 83/944	. . . .	Multiple punchings
Y10T 83/9442	. . .	Notching tool
Y10T 83/9444	. . . .	Shear type
Y10T 83/9447	. . .	Shear type
Y10T 83/9449	. . .	Spaced cut forming tool
Y10T 83/9452	. . .	With tool contour adjusting means
Y10T 83/9454	. .	Reciprocable type
Y10T 83/9457	. .	Joint or connection
Y10T 83/9459	. . .	Magnetic connection
Y10T 83/9461	. . .	Resiliently biased connection

Y10T 83/9464	. . . For rotary tool
Y10T 83/9466	. . . . Flexible sleevelike tool
Y10T 83/9469	. . . . Adjustable
Y10T 83/9471	. . . . . Rectilinearly
Y10T 83/9473	. . . For rectilinearly reciprocating tool
Y10T 83/9476	. . . . Tool is single element with continuous cutting edge [e.g., punch, etc.]
Y10T 83/9478	. . . . Tool is single element reciprocable generally perpendicularly to elongate cutting edge [e.g., shear, etc.]
Y10T 83/9481	. . . . Tool is single element reciprocable along elongate cutting edge [e.g., saw blade, etc.]
Y10T 83/9483	. . . . Adjustable
Y10T 83/9486	. . . . . Rectilinearly
Y10T 83/9488	. . . Adjustable
Y10T 83/949	. . . . Rectilinearly
Y10T 83/9493	. . Stationary cutter
Y10T 83/9495	. . . Nonparallel cutting edges
Y10T 83/9498	. . . Parallel cutting edges
Y10T 83/95	. Machine frame
Y10T 83/96	. . Guard
Y10T 83/97	. Miscellaneous

Former US Class 117 Series**Y10T 117/00 Single-crystal, oriented-crystal, and epitaxy growth processes; non-coating apparatus therefor**

Y10T 117/10	. Apparatus
Y10T 117/1004	. . with means for measuring, testing, or sensing
Y10T 117/1008	. . . with responsive control means
Y10T 117/1012	. . . with a window or port for visual observation or examination
Y10T 117/1016	. . with means for treating single-crystal [e.g., heat treating]
Y10T 117/102	. . for forming a platelet shape or a small diameter, elongate, generally cylindrical shape [e.g., whisker, fiber, needle, filament]
Y10T 117/1024	. . for crystallization from liquid or supercritical state
Y10T 117/1028	. . . Crucibleless apparatus having means providing movement of discrete droplets or solid particles to thin-film precursor [e.g., Verneuil method]
Y10T 117/1032	. . . Seed pulling
Y10T 117/1036	. . . . including solid member shaping means other than seed or product [e.g., EDFA die]
Y10T 117/104	. . . . . Means for forming a hollow structure [e.g., tube, polygon]
Y10T 117/1044	. . . . . including means forming a flat shape [e.g., ribbon]
Y10T 117/1048	. . . . . Pulling includes a horizontal component
Y10T 117/1052	. . . . including a sectioned crucible [e.g., double crucible, baffle]

Y10T 117/1056	. . . .	including details of precursor replenishment
Y10T 117/106	. . . .	including sealing means details
Y10T 117/1064	. . . .	including a fully-sealed or vacuum-maintained crystallization chamber [e.g., ampoule]
Y10T 117/1068	. . . .	including heating or cooling details [e.g., shield configuration]
Y10T 117/1072	. . . .	including details of means providing product movement [e.g., shaft guides, servo means]
Y10T 117/1076	. . . .	having means for producing a moving solid-liquid-solid zone
Y10T 117/108	. . . .	Including a solid member other than seed or product contacting the liquid [e.g., crucible, immersed heating element]
Y10T 117/1084	. . . .	having details of a stabilizing feature
Y10T 117/1088	. . . .	including heating or cooling details
Y10T 117/1092	. . . .	Shape defined by a solid member other than seed or product [e.g., Bridgman-Stockbarger]
Y10T 117/1096	. . . .	including pressurized crystallization means [e.g., hydrothermal]

Former US Class 137 series

Y10T 137/00	Fluid handling
Y10T 137/0318	. Processes
Y10T 137/0324	. . With control of flow by a condition or characteristic of a fluid
Y10T 137/0329	. . . Mixing of plural fluids of diverse characteristics or conditions
Y10T 137/0335	. . . . Controlled by consistency of mixture
Y10T 137/034	. . . . Controlled by conductivity of mixture
Y10T 137/0346	. . . . Controlled by heat of combustion of mixture
Y10T 137/0352	. . . . Controlled by pressure
Y10T 137/0357	. . . For producing uniform flow
Y10T 137/0363	. . . For producing proportionate flow
Y10T 137/0368	. . . By speed of fluid
Y10T 137/0374	. . . For regulating boiler feed water level
Y10T 137/0379	. . . By fluid pressure
Y10T 137/0385	. . Carbonated beverage handling processes
Y10T 137/0391	. . Affecting flow by the addition of material or energy
Y10T 137/0396	. . Involving pressure control
Y10T 137/0402	. . Cleaning, repairing, or assembling
Y10T 137/0407	. . . Repairing or assembling hydrant [e.g., fireplug, etc.]
Y10T 137/0413	. . . Gas or water meter repairing or assembling
Y10T 137/0419	. . . Fluid cleaning or flushing
Y10T 137/0424	. . . . Liquid cleaning or flushing
Y10T 137/043	. . . . . Valve or valve seat cleaning
Y10T 137/0435	. . . Mechanical cleaning [e.g., pig, etc.]

Y10T 137/0441	. . .	Repairing, securing, replacing, or servicing pipe joint, valve, or tank
Y10T 137/0447	. . . .	Including joint or coupling
Y10T 137/0452	. . . .	Detecting or repairing leak
Y10T 137/0458	. . . .	Tapping pipe, keg, or tank
Y10T 137/0463	. . . . .	Particular aperture forming means
Y10T 137/0469	. . . . .	Cutter or cutting tool
Y10T 137/0475	. . . . .	Having deformable or inflatable means
Y10T 137/048	. . . .	With content loading or unloading [e.g., dispensing, discharge assistant, etc.]
Y10T 137/0486	. . . .	Specific valve or valve element mounting or repairing
Y10T 137/0491	. . .	Valve or valve element assembling, disassembling, or replacing
Y10T 137/0497	. . . .	Fluid actuated or retarded
Y10T 137/0502	. . . .	Multi way valve
Y10T 137/0508	. . . .	Ball valve or rotary ball valve
Y10T 137/0514	. . . .	Gate valve
Y10T 137/0519	. . . .	Plug valve
Y10T 137/0525	. . . .	Butterfly valve
Y10T 137/053	. . . .	Float valve
Y10T 137/0536	. .	Highspeed fluid intake means [e.g., jet engine intake]
Y10T 137/0645	. .	With condition responsive control means
Y10T 137/0753	. .	Control by change of position or inertia of system
Y10T 137/0777	. .	With second control
Y10T 137/0801	. .	Position relative body of water [e.g., marine governors]
Y10T 137/0826	. . .	Float controlled
Y10T 137/085	. . .	Pressure or head controlled
Y10T 137/0874	. .	Vent opening or closing on tipping container
Y10T 137/0898	. .	By shifting of liquid level
Y10T 137/0923	. .	By pendulum or swinging member
Y10T 137/0947	. . .	With servo connection to valve
Y10T 137/0971	. .	Speed responsive valve control
Y10T 137/0989	. .	Acceleration responsive valve control
Y10T 137/1007	. .	With manual valve control
Y10T 137/1026	. .	Speed change and excess speed valve control
Y10T 137/1044	. .	With other condition responsive valve control
Y10T 137/1062	. . .	Governor drive failure responsive
Y10T 137/108	. .	Centrifugal mass type [exclusive of liquid]
Y10T 137/1098	. . .	With multiple valves
Y10T 137/1116	. . .	Periodically actuated valve
Y10T 137/1135	. . .	Rotating valve and rotating governor
Y10T 137/1153	. . .	Excess speed responsive

Y10T 137/1171	. . . With fluid servo-motor
Y10T 137/1189	. Freeze condition responsive safety systems
Y10T 137/1244	. . With freeze waste
Y10T 137/1298	. . Stop and waste
Y10T 137/1353	. . Low temperature responsive drains
Y10T 137/1407	. Combustion failure responsive fuel safety cut-off for burners
Y10T 137/1516	. . Thermo-electric
Y10T 137/1624	. Destructible or deformable element controlled
Y10T 137/1632	. . Destructible element
Y10T 137/1639	. . . Combined destructible and fusible element
Y10T 137/1647	. . . Explosive actuation
Y10T 137/1654	. . . Separable valve coupling or conduit
Y10T 137/1662	. . . . Tensile or sheer pin or bolt
Y10T 137/1669	. . . Tensile or sheer pin or bolt
Y10T 137/1677	. . . . Pressure causes pin or bolt to destruct
Y10T 137/1684	. . . With alarm or indicator
Y10T 137/1692	. . . Rupture disc
Y10T 137/1699	. . . . Means for holding entire disc after rupture
Y10T 137/1707	. . . . Disc burst after destruction of additional element
Y10T 137/1714	. . . . Direct pressure causes disc to burst
Y10T 137/1722	. . . . . Two-way rupture disc
Y10T 137/1729	. . . . . Dome shape
Y10T 137/1737	. . . . . Reverse buckling
Y10T 137/1744	. . . . Specific weakening point
Y10T 137/1752	. . . . Integral disc assembly
Y10T 137/1759	. . . . Knife or cutter causes disc to break
Y10T 137/1767	. . . . . Movable knife or cutter
Y10T 137/1774	. . . With counterbalancing element
Y10T 137/1782	. . . Frangible element returns pressure responsive valve
Y10T 137/1789	. . . Having pressure responsive valve
Y10T 137/1797	. . Heat destructible or fusible
Y10T 137/1804	. . . With second sensing means
Y10T 137/1812	. . . In fluid flow path
Y10T 137/1819	. . . Safety cut-off
Y10T 137/1827	. . . . With heater for destructible or fusible element
Y10T 137/1834	. . . . With external closing means
Y10T 137/1842	. Ambient condition change responsive
Y10T 137/1866	. . For controlling soil irrigation
Y10T 137/189	. . . Soil moisture sensing
Y10T 137/1915	. . Burner gas cutoff

Y10T 137/1939	. . Atmospheric
Y10T 137/1963	. . . Temperature
Y10T 137/1987	. . . . With additional diverse control
Y10T 137/2012	. . . Pressure
Y10T 137/2036	. . Underwater
Y10T 137/206	. Flow affected by fluid contact, energy field or coanda effect [e.g., pure fluid device or system]
Y10T 137/2065	. . Responsive to condition external of system
Y10T 137/2071	. . . And causing change or correction of sensed condition
Y10T 137/2076	. . Utilizing diverse fluids
Y10T 137/2082	. . Utilizing particular fluid
Y10T 137/2087	. . Means to cause rotational flow of fluid [e.g., vortex generator]
Y10T 137/2093	. . . Plural vortex generators
Y10T 137/2098	. . . Vortex generator as control for system
Y10T 137/2104	. . . Vortex generator in interaction chamber of device
Y10T 137/2109	. . . By tangential input to axial output [e.g., vortex amplifier]
Y10T 137/2115	. . . . With means to vary input or output of device
Y10T 137/212	. . System comprising plural fluidic devices or stages
Y10T 137/2125	. . . Plural power inputs [e.g., parallel inputs]
Y10T 137/2131	. . . . Variable or different-value power inputs
Y10T 137/2136	. . . . . Pulsating power input and continuous-flow power input
Y10T 137/2142	. . . . With variable or selectable source of control-input signal
Y10T 137/2147	. . . . To cascaded plural devices
Y10T 137/2153	. . . . . With feedback passage[s] between devices of cascade
Y10T 137/2158	. . . . . With pulsed control-input signal
Y10T 137/2164	. . Plural power inputs to single device
Y10T 137/2169	. . . Intersecting at interaction region [e.g., comparator]
Y10T 137/2174	. . . . Co-lineal, oppositely-directed power inputs [e.g., impact modulator]
Y10T 137/218	. . Means to regulate or vary operation of device
Y10T 137/2185	. . . To vary frequency of pulses or oscillations
Y10T 137/2191	. . . By non-fluid energy field affecting input [e.g., transducer]
Y10T 137/2196	. . . . Acoustical or thermal energy
Y10T 137/2202	. . . By movable element
Y10T 137/2207	. . . . Operating at timed intervals [e.g., to produce pulses]
Y10T 137/2213	. . . . Electrically-actuated element [e.g., electro-mechanical transducer]
Y10T 137/2218	. . . . Means [e.g., valve] in control input
Y10T 137/2224	. . Structure of body of device
Y10T 137/2229	. . Device including passages having V over T configuration
Y10T 137/2234	. . . And feedback passage[s] or path[s]
Y10T 137/224	. . . With particular characteristics of control input

Y10T 137/2245	. . . . Multiple control-input passages
Y10T 137/2251	. . . And multiple or joined power-outlet passages
Y10T 137/2256	. . . And enlarged interaction chamber
Y10T 137/2262	. . . And vent passage[s]
Y10T 137/2267	. . Device including passages having V over gamma configuration
Y10T 137/2273	. . Device including linearly-aligned power stream emitter and power stream collector
Y10T 137/2278	. Pressure modulating relays or followers
Y10T 137/2322	. . Jet control type
Y10T 137/2365	. . Plural series units
Y10T 137/2409	. . With counter-balancing pressure feedback to the modulating device
Y10T 137/2452	. . . With counter-counter balancing pressure feedback
Y10T 137/2496	. Self-proportioning or correlating systems
Y10T 137/2499	. . Mixture condition maintaining or sensing
Y10T 137/2501	. . . Dividing and recombining flow
Y10T 137/2504	. . . By specific gravity
Y10T 137/2506	. . . By viscosity or consistency
Y10T 137/2509	. . . By optical or chemical property
Y10T 137/2511	. . Fuel controlled by boiler or water system condition
Y10T 137/2514	. . Self-proportioning flow systems
Y10T 137/2516	. . . Interconnected flow displacement elements
Y10T 137/2519	. . . . Movable trap chamber
Y10T 137/2521	. . . Flow comparison or differential response
Y10T 137/2524	. . . . Flow dividers [e.g., reversely acting controls]
Y10T 137/2526	. . . . Main line flow displaces or entrains material from reservoir
Y10T 137/2529	. . . . With electrical controller
Y10T 137/2531	. . . Flow displacement element actuates electrical controller
Y10T 137/2534	. . . Liquid level response
Y10T 137/2536	. . . . Float controlled weir or valve
Y10T 137/2539	. . . . Swinging outlet pipe controller
Y10T 137/2541	. . . With measuring type discharge assistant
Y10T 137/2544	. . Supply and exhaust type
Y10T 137/2546	. . . Vacuum or suction pulsator type [e.g., milking machine]
Y10T 137/2549	. . . . With trip linkage or snap action
Y10T 137/2552	. . . . With pulsation responsive pilot valve
Y10T 137/2554	. . . Reversing or 4-way valve systems
Y10T 137/2557	. . . Waste responsive to flow stoppage
Y10T 137/2559	. . Self-controlled branched flow systems
Y10T 137/2562	. . . Dividing and recombining
Y10T 137/2564	. . . Plural inflows

Y10T 137/2567	. . . .	Alternate or successive inflows
Y10T 137/2569	. . . . .	Control by depletion of source
Y10T 137/2572	. . . .	One inflow supplements another
Y10T 137/2574	. . .	Bypass or relief controlled by main line fluid condition
Y10T 137/2577	. . . .	Liquid level responsive
Y10T 137/2579	. . . .	Flow rate responsive
Y10T 137/2582	. . . . .	Including controlling main line flow
Y10T 137/2584	. . . . .	Relief or bypass closes as main opens
Y10T 137/2587	. . . . .	Bypass or relief valve biased open
Y10T 137/2589	. . . . .	Pilot valve operated
Y10T 137/2592	. . . . .	Carried choke
Y10T 137/2594	. . . . .	Choke
Y10T 137/2597	. . . . .	Variable choke resistance
Y10T 137/2599	. . . . .	Venturi
Y10T 137/2602	. . . . .	Flapper
Y10T 137/2605	. . . . .	Pressure responsive
Y10T 137/2607	. . . . .	With pressure reducing inlet valve
Y10T 137/261	. . . . .	Relief port through common sensing means
Y10T 137/2612	. . . . .	Common sensor for both bypass or relief valve and other branch valve
Y10T 137/2615	. . . . .	Bypass or relief valve opens as other branch valve closes
Y10T 137/2617	. . . . .	Bypass or relief valve biased open
Y10T 137/262	. . . . .	Increasing pressure progressively closes then reopens by-pass or relief valve
Y10T 137/2622	. . . . .	Bypass or relief valve responsive to pressure downstream of outlet valve
Y10T 137/2625	. . . . .	Pilot valve
Y10T 137/2627	. . . . .	Outlet valve carried by bypass or relief valve
Y10T 137/263	. . . . .	Plural sensors for single bypass or relief valve
Y10T 137/2632	. . . . .	Sensors interconnected by timing or restrictive orifice
Y10T 137/2635	. . . . .	Pilot valve operated
Y10T 137/2637	. . . . .	Mechanical movement between sensor and valve
Y10T 137/264	. . . . .	Electrical control
Y10T 137/2642	. . . . .	Sensor rigid with valve
Y10T 137/2645	. . . . .	Flexible sensor
Y10T 137/2647	. . . . .	Pressure responsive outlet valve
Y10T 137/265	. . .	Plural outflows
Y10T 137/2652	. . . .	Single actuator operates plural outlets simultaneously
Y10T 137/2655	. . . .	Biased open isolation valve
Y10T 137/2657	. . . .	Flow rate responsive
Y10T 137/266	. . . . .	Primer valve

Y10T 137/2663	. . . . .	Pressure responsive
Y10T 137/2665	. . . . .	With external control for correlating valve [e.g., manual]
Y10T 137/2668	. . . . .	Alternately or successively substituted outflow
Y10T 137/267	. . . . .	Control by filling auxiliary gravitating or float operating tank
Y10T 137/2673	. . . . .	Control by filling outlet tank or receiver
Y10T 137/2675	. . . . .	Float controlled
Y10T 137/2678	. . . . .	Four port reversing valve
Y10T 137/268	. . . . .	Responsive to pressure or flow interruption
Y10T 137/2683	. . . . .	Plural outlets control with automatic reset
Y10T 137/2685	. . . . .	Manually set to a single outflow position
Y10T 137/2688	. . . . .	Flow rate responsive
Y10T 137/269	. . . . .	Flow sensing turbine
Y10T 137/2693	. . . . .	Pressure responsive
Y10T 137/2695	. . . . .	Responsive to outlet pressure
Y10T 137/2698	. . . . .	Electrical control
Y10T 137/27	. . . . .	Liquid level responsive
Y10T 137/2703	. . . . .	Flow rate responsive
Y10T 137/2705	. . . . .	Pressure differential
Y10T 137/2708	. . . . .	Plural sensors
Y10T 137/271	. . . . .	For single valve
Y10T 137/2713	. . . . .	Siphons
Y10T 137/272	. . . . .	Plural
Y10T 137/2727	. . . . .	Tank truck mounted
Y10T 137/2733	. . . . .	Sequentially discharging in parallel
Y10T 137/274	. . . . .	From plural tanks
Y10T 137/2747	. . . . .	Main siphon with auxiliary starting, stopping or resetting siphon
Y10T 137/2754	. . . . .	Sinking or bucket-type float operated main siphon, float emptying auxiliary siphon
Y10T 137/2761	. . . . .	With discharge-controlling receiver
Y10T 137/2768	. . . . .	With float
Y10T 137/2774	. . . . .	Periodic or accumulation responsive discharge
Y10T 137/2781	. . . . .	With manual control
Y10T 137/2788	. . . . .	Control by filling auxiliary tank
Y10T 137/2795	. . . . .	Float-operated inlet to siphon
Y10T 137/2802	. . . . .	Release of trapped air
Y10T 137/2808	. . . . .	Through float-operated vent
Y10T 137/2815	. . . . .	Through liquid trap seal
Y10T 137/2822	. . . . .	Auxiliary liquid trap seal
Y10T 137/2829	. . . . .	With strainer, filter, separator or sediment trap
Y10T 137/2836	. . . . .	With recorder, register, signal, indicator or inspection window

Y10T 137/2842	. . With flow starting, stopping or maintaining means
Y10T 137/2849	. . . Siphon venting or breaking
Y10T 137/2856	. . . With leakage or entrained air removal
Y10T 137/2863	. . . Pressure applied to liquid in supply chamber
Y10T 137/287	. . . Plunge or immersion starting
Y10T 137/2877	. . . Pump or liquid displacement device for flow passage
Y10T 137/2883	. . . . Piston
Y10T 137/289	. . . . . Co-axial within flow passage
Y10T 137/2897	. . . . Collapsible bulb
Y10T 137/2904	. . . Siphon inlet movable to and from seat
Y10T 137/2911	. . . With valve or closure in-flow passage
Y10T 137/2917	. . With means for mounting and/or positioning relative to siphon chamber
Y10T 137/2924	. . Elements
Y10T 137/2931	. Diverse fluid containing pressure systems
Y10T 137/2934	. . Gas lift valves for wells
Y10T 137/2937	. . Gas pressure discharge of liquids feed traps [e.g., to boiler]
Y10T 137/294	. . . Gas pressure controlled by amount of liquids in boiler or discharge receiver
Y10T 137/2943	. . . . Pressure connection at liquid level in boiler or discharge receiver
Y10T 137/2947	. . . Gas pressure controlled by amount of liquid in trap
Y10T 137/295	. . . . Plural trap chambers
Y10T 137/2953	. . . . . Gravitating
Y10T 137/2956	. . . . Gravitating vessel
Y10T 137/2959	. . . . . Sinking or bucket type float
Y10T 137/2962	. . . . . Pivoted vessel with fluid passage through pivot
Y10T 137/2965	. . . . Float responsive
Y10T 137/2968	. . . . . Liquid control valve positively actuated
Y10T 137/2971	. . . . . Gas condensing type
Y10T 137/2975	. . . . . Gas inlet and outlet valves unitary
Y10T 137/2978	. . . Gas pressure controlled by manual or cyclic means
Y10T 137/2981	. . . . Movable trap chamber
Y10T 137/2984	. . Foam control in gas charged liquids
Y10T 137/2987	. . . Level or pressure responsive
Y10T 137/299	. . . Separate handling of foam
Y10T 137/2993	. . . With conditioning trap or chamber
Y10T 137/2996	. . . . Recarbonation
Y10T 137/30	. . . . With trap or chamber by-pass
Y10T 137/3003	. . Fluid separating traps or vents
Y10T 137/3006	. . . Liquids separated from liquid
Y10T 137/3009	. . . Plural discriminating outlets for diverse fluids

Y10T 137/3012	. . . .	Common actuator for control valves
Y10T 137/3015	. . . .	Choke or restricted passage gas bleed
Y10T 137/3018	. . . . .	From above liquid level
Y10T 137/3021	. . . .	Discriminating outlet for liquid
Y10T 137/3024	. . . .	With alternately operated inlet and outlet valves
Y10T 137/3028	. . . .	With non-discriminating gas vent or liquid discharge
Y10T 137/3031	. . . . .	Abnormal pressure responsive liquid blow-off or drain
Y10T 137/3034	. . . . .	Manual control
Y10T 137/3037	. . . .	With auxiliary inlet or by-pass valve
Y10T 137/304	. . . .	With fluid responsive valve
Y10T 137/3043	. . . . .	Successively opened valves
Y10T 137/3046	. . . . .	Gas collecting float [e.g., inverted bucket]
Y10T 137/3049	. . . . .	Downstream from valve
Y10T 137/3052	. . . . .	Level responsive
Y10T 137/3056	. . . . .	Weight or pressure
Y10T 137/3059	. . . . .	Gravitating vessel
Y10T 137/3062	. . . . .	Sinking or bucket type float
Y10T 137/3065	. . . . .	Servo-control
Y10T 137/3068	. . . . .	Float
Y10T 137/3071	. . . . .	With main line gas outlet from trap chamber
Y10T 137/3074	. . . . .	With outlet extending above liquid in trap
Y10T 137/3077	. . . . .	Servo-control
Y10T 137/308	. . . . .	With pressure balanced outlet valve
Y10T 137/3084	. . . .	Discriminating outlet for gas
Y10T 137/3087	. . . .	With reverse flow stop or pressure regulating valve
Y10T 137/309	. . . .	Fluid sensing valve
Y10T 137/3093	. . . . .	With vaporized liquid stop
Y10T 137/3096	. . . . .	With separate return for condensate
Y10T 137/3099	. . . . .	Float responsive
Y10T 137/3102	. . . .	With liquid emptying means
Y10T 137/3105	. . . .	Self-emptying
Y10T 137/3109	. . . .	Liquid filling by evacuating container
Y10T 137/3112	. . . .	Main line flow displaces additive from shunt reservoir
Y10T 137/3115	. . . .	Gas pressure storage over or displacement of liquid
Y10T 137/3118	. . . .	Surge suppression
Y10T 137/3121	. . . .	With return of liquid to supply
Y10T 137/3124	. . . .	Plural units
Y10T 137/3127	. . . .	With gas maintenance or application
Y10T 137/313	. . . .	Gas carried by or evolved from liquid
Y10T 137/3133	. . . . .	Gas injectors

- Y10T 137/3137 Gas injected by liquid pressure or flow
- Y10T 137/314 Unitary mounting for gas pressure inlet and liquid outlet
- Y10T 137/3143 . . . With liquid level responsive gas vent or whistle
- Y10T 137/3146 Combined high and low level responsive
- Y10T 137/3149 . Back flow prevention by vacuum breaking [e.g., anti-siphon devices]
- Y10T 137/3185 . . Air vent in liquid flow line
- Y10T 137/3222 . . . With liquid seal in liquid flow line
- Y10T 137/3258 Automatic valve in vent line
- Y10T 137/3294 . . . Valved
- Y10T 137/3331 With co-acting valve in liquid flow path
- Y10T 137/3367 . Larner-Johnson type valves; i.e., telescoping internal valve in expanded flow line section
- Y10T 137/3421 . . Line condition change responsive
- Y10T 137/3476 . . Internal servo-motor with internal pilot valve
- Y10T 137/353 . . . Pilot controlled passage in nose or needle
- Y10T 137/3584 . Inflatable article [e.g., tire filling chuck and/or stem]
- Y10T 137/36 . . With pressure-responsive pressure-control means
- Y10T 137/3615 . . . Pulsating
- Y10T 137/3631 . . . Diaphragm, bellows or expansible tube
- Y10T 137/3646 . . . Co-axial inflation and relief valves
- Y10T 137/3662 . . With gauge or indicator
- Y10T 137/3677 . . . With deflating means
- Y10T 137/3693 . . . Selectively connected
- Y10T 137/3709 . . Stem attached relief valve
- Y10T 137/3724 . . With coupling means
- Y10T 137/374 . . With cap
- Y10T 137/3755 . . . Valve actuating, assembling or locking means on cap
- Y10T 137/3771 Valve manually seated
- Y10T 137/3786 . . Removable valve head and seat unit [valve insides]
- Y10T 137/3802 . With vehicle guide or support, e.g., service station
- Y10T 137/402 . Distribution systems involving geographic features
- Y10T 137/4238 . With cleaner, lubrication added to fluid or liquid sealing at valve interface
- Y10T 137/4245 . . Cleaning or steam sterilizing
- Y10T 137/4252 . . . Reverse fluid flow
- Y10T 137/4259 . . . With separate material addition
- Y10T 137/4266 . . . Steam sterilizing
- Y10T 137/4273 . . . Mechanical cleaning
- Y10T 137/428 Valve grinding motion of valve on seat
- Y10T 137/4287 Concentric stem
- Y10T 137/4294 Spring pressed

Y10T 137/4301	. . . . .	Lost motion permits grinding
Y10T 137/4308	. . . . .	With swivel-preventing means
Y10T 137/4315	. . . . .	Nut releasable from body and/or stem
Y10T 137/4322	. . . . .	With independent grinding actuator
Y10T 137/4329	. . . . .	Separable
Y10T 137/4336	. . . . .	Cleaning member reciprocates in passage
Y10T 137/4343	. . . . .	By-pass cleaning
Y10T 137/4351	. . . . .	Independent actuation
Y10T 137/4358	. . . . .	Liquid supplied at valve interface
Y10T 137/4365	. . . . .	Plural feed
Y10T 137/4372	. . . . .	Line pressure feed
Y10T 137/4379	. . . . .	Feed by or with actuation
Y10T 137/4386	. . . . .	Loss control
Y10T 137/4393	. . . . .	Screw feed
Y10T 137/44	. . . . .	With check valve
Y10T 137/4407	. . . . .	Excess relief
Y10T 137/4414	. . . . .	Jacking
Y10T 137/4421	. . . . .	Jacking
Y10T 137/4428	. . . . .	Seating
Y10T 137/4435	. . . . .	Spring biased piston feed
Y10T 137/4442	. . . . .	External pressure
Y10T 137/4449	. . . . .	Gravity or capillary feed
Y10T 137/4456	. . . . .	With liquid valves or liquid trap seals
Y10T 137/4463	. . . . .	Liquid seal in liquid flow line; flow liquid forms seal
Y10T 137/4471	. . . . .	Valves
Y10T 137/4478	. . . . .	Line condition change responsive
Y10T 137/4486	. . . . .	Plural valves or valve seats
Y10T 137/4493	. . . . .	Pivoted valve
Y10T 137/4501	. . . . .	Ball valve
Y10T 137/4508	. . . . .	Seats vertically up
Y10T 137/4516	. . . . .	Seal replenishers
Y10T 137/4523	. . . . .	Plural inlet
Y10T 137/4531	. . . . .	Divided and recombined passages
Y10T 137/4538	. . . . .	Tangential inlet flow
Y10T 137/4546	. . . . .	Downward partition encircles projecting outlet
Y10T 137/4553	. . . . .	Submerged inlet pipe end
Y10T 137/4561	. . . . .	Hinged seal bowl
Y10T 137/4568	. . . . .	Distinct seal bowl in flow line connected casing
Y10T 137/4576	. . . . .	U-seals
Y10T 137/4583	. . . . .	Topside access beneath cover plate closed floor opening

Y10T 137/4591	. . . . Enlarged upflow leg
Y10T 137/4598	. . . . . Topside access opening
Y10T 137/4606	. . . . Even diameter legs
Y10T 137/4613	. . . . . Access opening
Y10T 137/4621	. . Seal for relatively movable valving parts
Y10T 137/4628	. . . Horizontally moving valve
Y10T 137/4636	. . . . Rotary
Y10T 137/4643	. . Liquid valves
Y10T 137/4651	. . . Branched passage for sealing liquid
Y10T 137/4658	. . . With auxiliary means for varying liquid level
Y10T 137/4666	. . . With baffle
Y10T 137/4673	. Plural tanks or compartments with parallel flow
Y10T 137/469	. . Sequentially filled and emptied [e.g., holding type]
Y10T 137/4707	. . . With relative rotation of tank group and filling head
Y10T 137/4723	. . . . With rotary filling and emptying head
Y10T 137/474	. . With housings, supports or stacking arrangements
Y10T 137/4757	. . Battery or electrolytic cell replenishment
Y10T 137/4774	. . . Barometric supply
Y10T 137/479	. . Flow dividing compartments
Y10T 137/4807	. . Tank type manifold [i.e., one tank supplies or receives from at least two others]
Y10T 137/4824	. . Tank within tank
Y10T 137/4841	. . With cross connecting passage
Y10T 137/4857	. . With manifold or grouped outlets
Y10T 137/4874	. . . Tank truck type
Y10T 137/4891	. With holder for solid, flaky or pulverized material to be dissolved or entrained
Y10T 137/5109	. Convertible
Y10T 137/5153	. . Reversible check
Y10T 137/5196	. . Unit orientable in a single location between plural positions
Y10T 137/524	. . . Reversible stop and vent or waste
Y10T 137/5283	. . Units interchangeable between alternate locations
Y10T 137/5327	. Hydrant type
Y10T 137/5333	. . Water crane type
Y10T 137/5339	. . . Spout operated valve
Y10T 137/5345	. . . Rotating riser
Y10T 137/535	. . . . Spout articulated to riser
Y10T 137/5356	. . . . Vertically movable riser
Y10T 137/5362	. . . Extensible spout
Y10T 137/5368	. . . Spout articulated to riser
Y10T 137/5374	. . Plural riser

Y10T 137/538	. . .	Expansible chamber operated by valve actuator for draining riser
Y10T 137/5386	. . .	With pump or ejector
Y10T 137/5392	. . .	Removable valve and valve seat
Y10T 137/5397	. . . .	With extension to facilitate removal
Y10T 137/5403	. . .	Removable valve with supplemental check valve
Y10T 137/5409	. . .	Movable riser actuated valve
Y10T 137/5415	. . . .	Reciprocating riser
Y10T 137/5421	. . . .	Piston type valve
Y10T 137/5427	. . .	Balanced valve
Y10T 137/5433	. . .	Valve actuator extends laterally from bottom of riser
Y10T 137/5438	. . .	Valve actuator outside riser
Y10T 137/5444	. . . .	Lever actuator
Y10T 137/545	. . . .	With casing, flush with ground or pavement surface
Y10T 137/5456	. . .	With casing
Y10T 137/5462	. . . .	Flush with ground or pavement surface
Y10T 137/5468	. . . .	Cap, cover or hood
Y10T 137/5474	. . . .	With heater
Y10T 137/5479	. . .	With actuator lubricating means
Y10T 137/5485	. . .	With valve at outlet
Y10T 137/5491	. . .	With supplemental valve
Y10T 137/5497	. . .	Protection against freezing
Y10T 137/5503	. . . .	Stop and waste
Y10T 137/5509	. . . .	With disabling means
Y10T 137/5515	. . . .	Separate relatively movable valves with single actuator
Y10T 137/5521	. . . . .	Unidirectional abutting connection between main valve or actuator and waste valve
Y10T 137/5526	. . . . .	With screw or gear in actuating mechanism
Y10T 137/5532	. . . . .	Reciprocating relatively fixed valves
Y10T 137/5538	. . . . .	Waste through lower valve guide
Y10T 137/5544	. . .	Reversing valves - regenerative furnace type
Y10T 137/5617	. . .	With cooling
Y10T 137/5689	. . .	Rotary reversing valve
Y10T 137/5762	. . .	With leakage or drip collecting
Y10T 137/5835	. . .	Relatively movable receptacle or drain pipe and outlet
Y10T 137/5907	. . .	Collector for waste liquid derived from solid, gas or vapor
Y10T 137/598	. . .	With repair, tapping, assembly, or disassembly means
Y10T 137/5983	. . .	Blow out preventer or choke valve device [e.g., oil well flow controlling device, etc.]
Y10T 137/5987	. . .	Solenoid or electromagnetically operated valve
Y10T 137/599	. . .	Pressure regulating type valve

Y10T 137/5994	. . . Diaphragm type
Y10T 137/5997	. . Gas or water meter replacing
Y10T 137/60	. . Assembling or disassembling flexible tube or sleeve type valve
Y10T 137/6004	. . Assembling or disassembling float or float valve
Y10T 137/6007	. . Assembling or disassembling multi way valve
Y10T 137/6011	. . Assembling, disassembling, or removing cartridge type valve [e.g., insertable and removable as a unit, etc.]
Y10T 137/6014	. . . Faucet type [e.g., domestic water use, etc.]
Y10T 137/6017	. . . . Including removable valve head and seat unit
Y10T 137/6021	. . . . Including mechanical movement actuator
Y10T 137/6024	. . . . Particular handle or handle fastening means
Y10T 137/6028	. . Assembling or disassembling pivoted valve
Y10T 137/6031	. . Assembling or disassembling rotary valve
Y10T 137/6035	. . . Rotary ball valve
Y10T 137/6038	. . . . Particular valve seat or interface seal
Y10T 137/6041	. . . . . Replaceable
Y10T 137/6045	. . . . . With top entry valve
Y10T 137/6048	. . . Butterfly valve
Y10T 137/6052	. . . . Having valve head or seat packing
Y10T 137/6055	. . . . With head and stem collections
Y10T 137/6058	. . . Plug valve
Y10T 137/6062	. . . . Having retainer at actuator end
Y10T 137/6065	. . Assembling or disassembling reciprocating valve
Y10T 137/6069	. . . Having particularly packed or sealed mechanical movement actuator
Y10T 137/6072	. . . Gate valve
Y10T 137/6075	. . . . Bifaced
Y10T 137/6079	. . . . Having particular valve seat
Y10T 137/6082	. . . . . Including seal
Y10T 137/6086	. . Assembling or disassembling check valve
Y10T 137/6089	. . With mechanical movement between actuator and valve
Y10T 137/6092	. . . Plural motions of valve
Y10T 137/6096	. . . Lever type
Y10T 137/6099	. . . Gear type
Y10T 137/6103	. . . Cam type
Y10T 137/6106	. . . Screw type
Y10T 137/6109	. . Tool for applying or removing valve or valve member
Y10T 137/6113	. . . Including sealing feature
Y10T 137/6116	. . With holding means functioning only during transportation assembly or disassembly
Y10T 137/612	. . Tapping a pipe, keg, or apertured tank under pressure

Y10T 137/6123	. . .	With aperture forming means
Y10T 137/6126	. . .	Imperforate closure removing and holding tap
Y10T 137/613	. . .	With valved closure or bung
Y10T 137/6133	. . . .	Combined rotary and longitudinal movement of valve
Y10T 137/6137	. . . .	Longitudinal movement of valve
Y10T 137/614	. . . .	Rotary movement of valve
Y10T 137/6144	. . .	With core ejectors
Y10T 137/6147	. . . .	Impact operated
Y10T 137/615	. .	Foot valve extraction from top of enclosure
Y10T 137/6154	. .	With disassembly tool engaging feature
Y10T 137/6157	. . .	Wrench engaging lugs
Y10T 137/6161	. .	With provision of alternate wear parts
Y10T 137/6164	. . .	Valve heads and/or seats
Y10T 137/6167	. . . .	Opposite duplicate surfaces of unitary structure
Y10T 137/6171	. . . . .	Homogeneous material
Y10T 137/6174	. . . . .	Valve heads
Y10T 137/6178	. . . .	Different portions of continuous surfaces
Y10T 137/6181	. . . .	Successively used adjacent independent elements
Y10T 137/6184	. .	Removable valve with normally disabled supplemental check valve
Y10T 137/6188	. . .	Check valve disabled by normally movable main valve part
Y10T 137/6191	. . . .	Ball check
Y10T 137/6195	. . . .	Spring bias
Y10T 137/6198	. .	Non-valving motion of the valve or valve seat
Y10T 137/6253	. .	Rotary motion of a reciprocating valve
Y10T 137/6307	. . .	Turbine on valve
Y10T 137/6362	. . .	Manual rotating means
Y10T 137/6416	. .	With heating or cooling of the system
Y10T 137/6443	. .	With burner
Y10T 137/647	. . .	Flue extending through fluid
Y10T 137/6497	. .	Hot and cold water system having a connection from the hot to the cold channel
Y10T 137/6525	. .	Air heated or cooled [fan, fins, or channels]
Y10T 137/6552	. .	With diversion of part of fluid to heat or cool the device or its contents
Y10T 137/6579	. .	Circulating fluid in heat exchange relationship
Y10T 137/6606	. .	With electric heating element
Y10T 137/6633	. .	With fluid system support for workman or non-system material
Y10T 137/6851	. .	With casing, support, protector or static constructional installations
Y10T 137/6855	. .	Vehicle
Y10T 137/6858	. . .	Locomotive
Y10T 137/6862	. . . .	Boiler or steam dome

Y10T 137/6866	. . .	Railway car
Y10T 137/6869	. . . .	Car frame
Y10T 137/6873	. . . .	End of car
Y10T 137/6877	. . . .	Roof, wall or floor
Y10T 137/6881	. . .	Automotive
Y10T 137/6884	. . . .	Steering post or wheel
Y10T 137/6888	. . . .	Dash
Y10T 137/6892	. . . .	Floor or frame
Y10T 137/6895	. . . .	Fender or running board
Y10T 137/6899	. . .	With hose reel storage means
Y10T 137/6903	. . .	Guided by means of track or guideway
Y10T 137/6906	. . .	Aerial or water-supported [e.g., airplane or ship, etc.]
Y10T 137/691	. . .	With retractable or nonuse-positionable support wheel
Y10T 137/6914	. . .	Vehicle supports fluid compressor and compressed fluid storage tank
Y10T 137/6918	. .	With hose storage or retrieval means
Y10T 137/6921	. . .	With means for plural hoses
Y10T 137/6925	. . .	With flow regulation responsive to hose movement
Y10T 137/6929	. . . .	Reel type
Y10T 137/6932	. . .	With retrieval means
Y10T 137/6936	. . . .	Power stop or brake
Y10T 137/694	. . . . .	Responsive to position of hose in casing
Y10T 137/6943	. . . .	Biased to retracted position
Y10T 137/6947	. . . . .	Boom type
Y10T 137/6951	. . . . .	Weighted
Y10T 137/6954	. . .	Reel with support therefor
Y10T 137/6958	. . . .	Ground supported
Y10T 137/6962	. . .	Basket or holder for folded coiled hose
Y10T 137/6966	. .	Static constructional installations
Y10T 137/6969	. . .	Buildings
Y10T 137/6973	. . . .	Outside access to portions of the system
Y10T 137/6977	. . . .	Escutcheon type support
Y10T 137/698	. . . .	Wall
Y10T 137/6984	. . . . .	Recessed gas outlet box
Y10T 137/6988	. . . .	Floor installation
Y10T 137/6991	. . .	Ground supporting enclosure
Y10T 137/6995	. . . .	Valve and meter wells
Y10T 137/6999	. . . . .	With means to center well on valve
Y10T 137/7002	. . . . .	Detachable base plate
Y10T 137/7006	. . . . .	Vertical casing aligned by valve casing
Y10T 137/701	. . . . .	Combined with actuator

Y10T 137/7014	. . . . .	Telescopic well casing
Y10T 137/7017	. . . . .	Telescopic well casing
Y10T 137/7021	. . . . .	Covers
Y10T 137/7025	. . . . .	Pipe line transport
Y10T 137/7028	. . . . .	Tapering or tower type
Y10T 137/7032	. . . . .	Furniture and housing furnishings
Y10T 137/7036	. . . . .	Jacketed
Y10T 137/7039	. . . . .	Tank supports
Y10T 137/7043	. . . . .	Guards and shields
Y10T 137/7047	. . . . .	Resilient abutment for preventing breakage
Y10T 137/7051	. . . . .	Nozzle abutment for scratch or damage prevention
Y10T 137/7054	. . . . .	Cover for beer cooler aperture for faucet
Y10T 137/7058	. . . . .	Sanitary covers or shields
Y10T 137/7062	. . . . .	Valve guards
Y10T 137/7065	. . . . .	With means for accommodating a detachable actuator
Y10T 137/7069	. . . . .	With lock or seal
Y10T 137/71	. . . . .	With seal
Y10T 137/7131	. . . . .	Common lock and valve actuator
Y10T 137/7162	. . . . .	Combination lock
Y10T 137/7194	. . . . .	Biased valve
Y10T 137/7225	. . . . .	Mechanical movement between lock and valve
Y10T 137/7256	. . . . .	Locks against rotary motion
Y10T 137/7287	. . . . .	Liquid level responsive or maintaining systems
Y10T 137/729	. . . . .	Washing machine cycle control
Y10T 137/7293	. . . . .	Liquid excluding devices for gas inlet or outlets
Y10T 137/7297	. . . . .	With second diverse control
Y10T 137/73	. . . . .	Manual control
Y10T 137/7303	. . . . .	Control of both inflow and outflow of tank
Y10T 137/7306	. . . . .	Electrical characteristic sensing
Y10T 137/731	. . . . .	With control fluid connection at desired liquid level
Y10T 137/7313	. . . . .	Control of outflow from tank
Y10T 137/7316	. . . . .	Self-emptying tanks
Y10T 137/7319	. . . . .	By float
Y10T 137/7323	. . . . .	By float
Y10T 137/7326	. . . . .	Low level safety cut-off
Y10T 137/7329	. . . . .	With supplemental or safety closing means or bias
Y10T 137/7332	. . . . .	Sinking or bucket type float
Y10T 137/7336	. . . . .	Gravitating tank
Y10T 137/7339	. . . . .	By weight of accumulated fluid
Y10T 137/7342	. . . . .	In sinking or bucket type float

Y10T 137/7345	. . .	Oil burner fuel overflow preventing safety cut-offs
Y10T 137/7349	. . .	In communicating measuring vessel
Y10T 137/7352	. . . .	Top and bottom connections
Y10T 137/7355	. . .	In gravitating tank
Y10T 137/7358	. .	By float controlled valve
Y10T 137/7361	. . .	Valve opened by external means, closing or closing control by float
Y10T 137/7365	. . .	Single float controls plural valves
Y10T 137/7368	. . .	Servo relay operation of control
Y10T 137/7371	. . . .	Fluid pressure
Y10T 137/7374	. . . . .	Flexible diaphragm valve
Y10T 137/7378	. . . . .	From tank
Y10T 137/7381	. . .	Quick acting
Y10T 137/7384	. . . .	Pilot float released
Y10T 137/7387	. . . .	Over center mechanism
Y10T 137/7391	. . . . .	Shifting weight
Y10T 137/7394	. . . .	Trip mechanism
Y10T 137/7397	. . . . .	Weight or spring bias
Y10T 137/74	. . . .	Lost motion mechanism
Y10T 137/7404	. . .	Plural floats
Y10T 137/7407	. . .	With counter-balance
Y10T 137/741	. . . .	Within tank
Y10T 137/7413	. . .	Level adjustment or selection means
Y10T 137/7417	. . .	With float leakage disposal
Y10T 137/742	. . .	In separate communicating float chamber
Y10T 137/7423	. . .	Rectilinearly traveling float
Y10T 137/7426	. . . .	Float co-axial with valve or port
Y10T 137/743	. . . . .	Float is spreader or anti-splash means
Y10T 137/7433	. . . . .	Float surrounds inlet pipe
Y10T 137/7436	. . . . .	Float rigid with valve
Y10T 137/7439	. . .	Float arm operated valve
Y10T 137/7442	. . . .	With valve retarder or cushion means
Y10T 137/7446	. . . .	With flow guide or restrictor
Y10T 137/7449	. . . . .	External hood or deflector or annular outlet surrounding the inlet pipe
Y10T 137/7452	. . . .	Movable nozzle or inlet terminal
Y10T 137/7455	. . . .	Valve removable from outside container
Y10T 137/7459	. . . .	With U-shaped inlet pipe having terminal valve
Y10T 137/7462	. . . .	With refill pipe
Y10T 137/7465	. . . .	Assembly mounted on and having reciprocating valve element coaxial with inlet pipe

Y10T 137/7468	. . . . .	Horizontal or side entering pipe
Y10T 137/7472	. . . . .	Vertical inlet riser
Y10T 137/7475	. . . . .	With toggle or second lever connected to valve
Y10T 137/7478	. . . . .	With interposed cam, gear or threaded connection
Y10T 137/7481	. . . . .	Rotary valve element
Y10T 137/7485	. . . . .	Pivoted valve
Y10T 137/7488	. . . . .	Ball valves
Y10T 137/7491	. . . . .	Balanced valves
Y10T 137/7494	. . . . .	Flexible valve
Y10T 137/7498	. . . . .	Barometric
Y10T 137/7501	. . . . .	With shut-off between supply tank and receiver
Y10T 137/7504	. . . . .	Removable valve head and seat unit
Y10T 137/7559	. . . . .	Pump type
Y10T 137/7613	. . . . .	Threaded into valve casing
Y10T 137/7668	. . . . .	Retained by bonnet or closure
Y10T 137/7722	. . . . .	Line condition change responsive valves
Y10T 137/7723	. . . . .	Safety cut-off requiring reset
Y10T 137/7724	. . . . .	Thermal
Y10T 137/7725	. . . . .	Responsive to both high and low pressure or velocity
Y10T 137/7726	. . . . .	Responsive to change in rate of flow
Y10T 137/7727	. . . . .	Excessive flow cut-off
Y10T 137/7728	. . . . .	High pressure cut-off
Y10T 137/7729	. . . . .	Reset by pressure equalization valve or by-pass
Y10T 137/773	. . . . .	Fluid released trip
Y10T 137/7731	. . . . .	Fluid counter-biased or unseated valve
Y10T 137/7732	. . . . .	With mechanical stop against reopening
Y10T 137/7733	. . . . .	With fluid pressure seating of valve
Y10T 137/7734	. . . . .	Fluid opened valve requiring reset
Y10T 137/7736	. . . . .	Consistency responsive
Y10T 137/7737	. . . . .	Thermal responsive
Y10T 137/7738	. . . . .	Pop valves
Y10T 137/7739	. . . . .	Pop closing valves
Y10T 137/774	. . . . .	Pop pressure reactor in inflow to valve
Y10T 137/7741	. . . . .	Pop pressure reactor in branched released path
Y10T 137/7742	. . . . .	Separate relief valves or valves for each branch
Y10T 137/7743	. . . . .	Lost motion between pop pressure reactor and valve
Y10T 137/7744	. . . . .	Adjustable choke
Y10T 137/7745	. . . . .	Annular lip or baffle
Y10T 137/7746	. . . . .	On movable valve part
Y10T 137/7747	. . . . .	Screw threaded

Y10T 137/7748	. .	Combustion engine induction type
Y10T 137/7749	. . .	Valve in auxiliary inlet to induction line
Y10T 137/775	. . .	With manual modifier
Y10T 137/7751	. . .	With suction compensator
Y10T 137/7752	. . .	With separate reactor surface
Y10T 137/7753	. . .	Unbalanced pivoted valve [e.g., unbalanced butterfly type]
Y10T 137/7754	. .	Line flow effect assisted
Y10T 137/7755	. . .	Reactor surface normal to flow
Y10T 137/7756	. . .	Reactor surface separated from flow by apertured partition
Y10T 137/7757	. . . .	Through separate aperture
Y10T 137/7758	. .	Pilot or servo controlled
Y10T 137/7759	. . .	Responsive to change in rate of fluid flow
Y10T 137/776	. . . .	Control by pressures across flow line valve
Y10T 137/7761	. . .	Electrically actuated valve
Y10T 137/7762	. . .	Fluid pressure type
Y10T 137/7764	. . . .	Choked or throttled pressure type
Y10T 137/7765	. . . . .	Pilot valve within main valve head
Y10T 137/7766	. . . . .	Choked passage through main valve head
Y10T 137/7767	. . . . .	Loose fitting piston
Y10T 137/7768	. . . . .	Pilot controls supply to pressure chamber
Y10T 137/7769	. . . . .	Single acting fluid servo
Y10T 137/777	. . . . .	Spring biased
Y10T 137/7771	. .	Bi-directional flow valves
Y10T 137/7772	. . .	One head and seat carried by head of another
Y10T 137/7773	. . . .	Supporting valve only spring biased
Y10T 137/7774	. . . .	Supporting valve spring carried by supporting valve
Y10T 137/7775	. . . . .	Spring stop on supported valve stem
Y10T 137/7776	. . . . .	Spring abuts guide for supported valve stem
Y10T 137/7777	. . . . .	Both valves spring biased
Y10T 137/7778	. . .	Axes of ports perpendicular
Y10T 137/7779	. . .	Axes of ports parallel
Y10T 137/778	. . .	Axes of ports co-axial
Y10T 137/7781	. .	With separate connected fluid reactor surface
Y10T 137/7782	. . .	With manual or external control for line valve
Y10T 137/7783	. . .	Valve closes in responses to reverse flow
Y10T 137/7784	. . .	Responsive to change in rate of fluid flow
Y10T 137/7785	. . . .	Valve closes in response to excessive flow
Y10T 137/7786	. . . .	Turbine or swinging vane type reactor
Y10T 137/7787	. . . .	Expansible chamber subject to differential pressures
Y10T 137/7788	. . . . .	Pressures across fixed choke

Y10T 137/7789	. . . . .	With Venturi tube having a connection to throat
Y10T 137/7791	. . . . .	Pressures across flow line valve
Y10T 137/7792	. . . . .	Movable deflector or choke
Y10T 137/7793	. . . . .	With opening bias [e.g., pressure regulator]
Y10T 137/7794	. . . . .	With relief valve
Y10T 137/7795	. . . . .	Multi-stage
Y10T 137/7796	. . . . .	Senses inlet pressure
Y10T 137/7797	. . . . .	Bias variable during operation
Y10T 137/7798	. . . . .	Ancillary reactor surface responds to inlet pressure
Y10T 137/7799	. . . . .	Liquid transfer
Y10T 137/78	. . . . .	Weight
Y10T 137/7801	. . . . .	Balanced valve
Y10T 137/7802	. . . . .	Liquid level responsive gas flow control
Y10T 137/7803	. . . . .	With protective separator
Y10T 137/7804	. . . . .	Main flow through isolated reactor chamber
Y10T 137/7805	. . . . .	Through external pipe
Y10T 137/7806	. . . . .	Modified valve casing
Y10T 137/7807	. . . . .	Adjustable external lever
Y10T 137/7808	. . . . .	Apertured reactor surface surrounds flow line
Y10T 137/7809	. . . . .	Reactor surface separated by apertured partition
Y10T 137/781	. . . . .	In valve stem
Y10T 137/7811	. . . . .	Also through reactor surface
Y10T 137/7812	. . . . .	Valve stem passes through the aperture
Y10T 137/7813	. . . . .	Plural reactor surfaces
Y10T 137/7814	. . . . .	Reactor is an inverted cup having liquid seal
Y10T 137/7815	. . . . .	With movement dampener
Y10T 137/7816	. . . . .	Valve head in inlet chamber
Y10T 137/7818	. . . . .	Valve head in inlet chamber
Y10T 137/7819	. . . . .	Rectilinear valve stem rigid with reactor surface
Y10T 137/782	. . . . .	Reactor surface is diaphragm
Y10T 137/7821	. . . . .	With valve closing bias
Y10T 137/7822	. . . . .	Reactor surface closes chamber
Y10T 137/7823	. . . . .	Valve head in inlet chamber
Y10T 137/7824	. . . . .	Reactor surface is inverted cup [float]
Y10T 137/7825	. . . . .	Rectilinear valve stem rigid with reactor surface
Y10T 137/7826	. . . . .	With valve closing bias
Y10T 137/7827	. . . . .	In reactor chamber
Y10T 137/7828	. . . . .	Valve head on yoke
Y10T 137/7829	. . . . .	Yoke has valve closing bias
Y10T 137/783	. . . . .	Reactor operatively connected to valve by mechanical movement

Y10T 137/7831	. . . .	With mechanical movement between actuator and valve
Y10T 137/7832	. . .	Plural valves biased closed
Y10T 137/7833	. . .	With means for mounting or connecting to system
Y10T 137/7834	. . .	Valve seat or external sleeve moves to open valve
Y10T 137/7835	. . .	Valve seating in direction of flow
Y10T 137/7836	. . . .	Flexible diaphragm or bellows reactor
Y10T 137/7837	. .	Direct response valves [i.e., check valve type]
Y10T 137/7838	. . .	Plural
Y10T 137/7839	. . . .	Dividing and recombining in a single flow path
Y10T 137/784	. . . . .	Integral resilient member forms plural valves
Y10T 137/7841	. . . .	One valve carries head and seat for second valve
Y10T 137/7842	. . . .	Diverse types
Y10T 137/7843	. . . .	Integral resilient member forms plural valves
Y10T 137/7845	. . . .	With common biasing means
Y10T 137/7846	. . . .	Mechanically interconnected
Y10T 137/7847	. . .	With leak passage
Y10T 137/7848	. . . .	Permits flow at valve interface
Y10T 137/7849	. . . .	Bypass in valve casing
Y10T 137/785	. . .	With retarder or dashpot
Y10T 137/7851	. . . .	End of valve forms dashpot chamber
Y10T 137/7852	. . . .	End of valve moves inside dashpot chamber
Y10T 137/7853	. . . . .	Enlarged piston on end of valve stem
Y10T 137/7854	. . .	In couplings for coaxial conduits, e.g., drill pipe check valves
Y10T 137/7855	. . . .	Valve seat threaded into a coupling element
Y10T 137/7856	. . . .	Valve seat formed on or carried by a coupling element
Y10T 137/7857	. . . .	Valve seat clamped between coupling elements
Y10T 137/7858	. . .	With means for selecting area of valve or seat
Y10T 137/7859	. . .	Single head, plural ports in parallel
Y10T 137/786	. . . .	Concentric ports
Y10T 137/7861	. . . .	Annular head
Y10T 137/7862	. . . . .	Central post on seat
Y10T 137/7863	. . . . . .	Stop
Y10T 137/7864	. . . . . . .	With guide
Y10T 137/7865	. . . . . .	Guide
Y10T 137/7866	. . .	Plural seating
Y10T 137/7867	. . . .	Sequential
Y10T 137/7868	. . . . .	Resilient gasket
Y10T 137/7869	. . .	Biased open
Y10T 137/787	. . . .	Oppositely swinging vanes
Y10T 137/7871	. . . .	Weight biased

Y10T 137/7873	. . . . .	Ball valves
Y10T 137/7874	. . . . .	Edge pivoted valve
Y10T 137/7875	. . . . .	Pivoted valves
Y10T 137/7876	. . . . .	With external means for opposing bias
Y10T 137/7877	. . . . .	With means for retaining external means in bias opposing position
Y10T 137/7878	. . . . .	With bias adjustment indicator
Y10T 137/7879	. . . . .	Resilient material valve
Y10T 137/788	. . . . .	Having expansible port
Y10T 137/7881	. . . . .	Apertured plate
Y10T 137/7882	. . . . .	Having exit lip
Y10T 137/7883	. . . . .	With biasing means
Y10T 137/7884	. . . . .	Side vent
Y10T 137/7885	. . . . .	Multiple slit
Y10T 137/7886	. . . . .	Internally extending mount
Y10T 137/7887	. . . . .	Center flexing strip
Y10T 137/7888	. . . . .	With valve member flexing about securement
Y10T 137/7889	. . . . .	Sleeve
Y10T 137/789	. . . . .	Central mount
Y10T 137/7891	. . . . .	Flap or reed
Y10T 137/7892	. . . . .	With stop
Y10T 137/7893	. . . . .	With spring
Y10T 137/7894	. . . . .	With weight
Y10T 137/7895	. . . . .	Peripherally secured diaphragm
Y10T 137/7896	. . . . .	Annulus
Y10T 137/7897	. . . . .	Vacuum relief type
Y10T 137/7898	. . . . .	Pivoted valves
Y10T 137/79	. . . . .	Head retained by removable closure
Y10T 137/7901	. . . . .	Valve head movably connected for accommodation to seat
Y10T 137/7902	. . . . .	Valve mounted on end of pipe
Y10T 137/7903	. . . . .	Weight biased
Y10T 137/7904	. . . . .	Reciprocating valves
Y10T 137/7905	. . . . .	Plural biasing means
Y10T 137/7906	. . . . .	Cam means for adjusting and fixing bias
Y10T 137/7907	. . . . .	Varying effective lever arm
Y10T 137/7908	. . . . .	Weight biased
Y10T 137/7909	. . . . .	Valve body is the weight
Y10T 137/791	. . . . .	Ball valves
Y10T 137/7911	. . . . .	Removable cage
Y10T 137/7912	. . . . .	Separable seat
Y10T 137/7913	. . . . .	Guided head

Y10T 137/7914	. . . . .	Cage
Y10T 137/7915	. . . . .	Guide stem
Y10T 137/7916	. . . . .	With closing stop
Y10T 137/7917	. . . . .	Oppositely disposed
Y10T 137/7918	. . . . .	Head slidable on guide rod
Y10T 137/7919	. . . . .	Guide and seat integral unit
Y10T 137/792	. . . . .	Guide and closure integral unit
Y10T 137/7921	. . . . .	Weight coaxial with valve
Y10T 137/7922	. . . . .	Spring biased
Y10T 137/7923	. . . . .	With means to protect spring from fluid
Y10T 137/7924	. . . . .	Spring under tension
Y10T 137/7925	. . . . .	Piston-type valves
Y10T 137/7927	. . . . .	Ball valves
Y10T 137/7928	. . . . .	With follower
Y10T 137/7929	. . . . .	Spring coaxial with valve
Y10T 137/793	. . . . .	Broken valve parts retainer
Y10T 137/7931	. . . . .	Spring in inlet
Y10T 137/7932	. . . . .	Valve stem extends through fixed spring abutment
Y10T 137/7933	. . . . .	Yoke or cage-type support for valve stem
Y10T 137/7934	. . . . .	Spring abuts removable valve stem guide
Y10T 137/7935	. . . . .	Head slides on guide-rod concentric with spring
Y10T 137/7936	. . . . .	Spring guides valve head
Y10T 137/7937	. . . . .	Cage-type guide for stemless valves
Y10T 137/7938	. . . . .	Guide means integral and coplanar with valve disk
Y10T 137/7939	. . . . .	Head between spring and guide
Y10T 137/794	. . . . .	With means for separating solid material from the fluid
Y10T 137/7976	. . . . .	Plural separating elements
Y10T 137/8013	. . . . .	Sediment chamber
Y10T 137/8049	. . . . .	Movable strainer
Y10T 137/8085	. . . . .	Hollow strainer, fluid inlet and outlet perpendicular to each other
Y10T 137/8122	. . . . .	Planar strainer normal to flow path
Y10T 137/8158	. . . . .	With indicator, register, recorder, alarm or inspection means
Y10T 137/8175	. . . . .	Plural
Y10T 137/8192	. . . . .	Unobvious - "combination lock" type
Y10T 137/8208	. . . . .	Time
Y10T 137/8225	. . . . .	Position or extent of motion indicator
Y10T 137/8242	. . . . .	Electrical
Y10T 137/8259	. . . . .	Selection from plural branches
Y10T 137/8275	. . . . .	Indicator element rigidly carried by the movable element whose position is indicated

Y10T 137/8292	. . . . Movable indicator element is a pointer
Y10T 137/8309	. . . . . Pointer integral with handle
Y10T 137/8326	. . Fluid pressure responsive indicator, recorder or alarm
Y10T 137/8342	. . Liquid level responsive indicator, recorder or alarm
Y10T 137/8359	. . Inspection means
Y10T 137/8376	. Combined
Y10T 137/8593	. Systems
Y10T 137/85938	. . Non-valved flow dividers
Y10T 137/85946	. . Faucet connected, sink drained
Y10T 137/85954	. . Closed circulating system
Y10T 137/85962	. . . With thermal circulating means [thermo-siphons]
Y10T 137/8597	. . Main line as motive fluid for follower-type feeder
Y10T 137/85978	. . With pump
Y10T 137/85986	. . . Pumped fluid control
Y10T 137/85994	. . . . Manual
Y10T 137/86002	. . . . Fluid pressure responsive
Y10T 137/8601	. . . . . And pilot valve
Y10T 137/86019	. . . . . Direct response valve
Y10T 137/86027	. . . . Electric
Y10T 137/86035	. . . Combined with fluid receiver
Y10T 137/86043	. . . . Reserve or surge receiver
Y10T 137/86051	. . . . Compressed air supply unit
Y10T 137/86059	. . . . Hydraulic power unit
Y10T 137/86067	. . . . Fluid sump
Y10T 137/86075	. . . And jet-aspiration type pump
Y10T 137/86083	. . . Vacuum pump
Y10T 137/86091	. . . Resiliently mounted pump
Y10T 137/86099	. . . Hand pump
Y10T 137/86107	. . . Multiple inlet with multiple outlet
Y10T 137/86115	. . . Downstream cyclic distributor
Y10T 137/86123	. . . . Distributor part unitary with movable pump part
Y10T 137/86131	. . . Plural
Y10T 137/86139	. . . . Serial
Y10T 137/86147	. . . . . With single motive input
Y10T 137/86155	. . . . . . One pump driven by motive fluid from the other
Y10T 137/86163	. . . . Parallel
Y10T 137/86171	. . . With pump bypass
Y10T 137/86179	. . . Drain valve actuator mounted on pump
Y10T 137/86187	. . Plural tanks or compartments connected for serial flow
Y10T 137/86196	. . . Separable with valved-connecting passage

Y10T 137/86204	. . .	Fluid progresses by zigzag flow
Y10T 137/86212	. . .	Plural compartments formed by baffles
Y10T 137/86222	. . .	Plural top-to-bottom connected tanks
Y10T 137/86228	. . .	With communicating opening in common walls of tanks or compartments
Y10T 137/86236	. .	Tank with movable or adjustable outlet or overflow pipe
Y10T 137/86244	. . .	Horizontally traversing outlet
Y10T 137/86252	. . .	Float-supported outlet
Y10T 137/86266	. . .	Swinging outlet pipe or spout
Y10T 137/86268	. .	With running joint between movable parts of system
Y10T 137/86276	. .	Movable tank
Y10T 137/86284	. .	With antisplash means not in flow passage
Y10T 137/86292	. .	System with plural openings, one a gas vent or access opening
Y10T 137/863	. . .	Access and outlet
Y10T 137/86308	. . . .	Tank access opening and bottom outlet
Y10T 137/86316	. . . . .	Access opening interlock or telltale on outlet valve actuator
Y10T 137/86324	. . .	Tank with gas vent and inlet or outlet
Y10T 137/86332	. . . .	Vent and inlet or outlet in unitary mounting
Y10T 137/8634	. . .	With vented outlet
Y10T 137/86348	. .	Tank with internally extending flow guide, pipe or conduit
Y10T 137/86356	. . .	Nondraining overflow type
Y10T 137/86364	. . .	Inverted "U" passage
Y10T 137/86372	. . .	Inlet internally extending
Y10T 137/86381	. .	Head-establishing standpipe or expansion chamber [e.g., surge tanks]
Y10T 137/86389	. .	Programmer or timer
Y10T 137/86397	. . .	With independent valve controller
Y10T 137/86405	. . .	Repeating cycle
Y10T 137/86413	. . . .	Self-cycling
Y10T 137/86421	. . . .	Variable
Y10T 137/86429	. . . . .	Attachable and removable element
Y10T 137/86437	. . . . .	Adjustable cam
Y10T 137/86445	. . .	Plural, sequential, valve actuations
Y10T 137/86453	. . . .	Plural trips or trip actuations
Y10T 137/86461	. . . .	Variable cycle
Y10T 137/86469	. . .	Clock alarm mechanism controlled
Y10T 137/86477	. . .	Biased latch, cam operated
Y10T 137/86485	. .	Line condition change responsive release of valve
Y10T 137/86493	. .	Multi-way valve unit
Y10T 137/86501	. . .	Sequential distributor or collector type
Y10T 137/86509	. . .	Sequentially progressive opening or closing of plural ports
Y10T 137/86517	. . . .	With subsequent closing of first port

Y10T 137/86525	. . . . .	Flow combining with flow dividing
Y10T 137/86533	. . . . .	Rotary
Y10T 137/86541	. . . . .	Plug
Y10T 137/86549	. . . . .	Selective reciprocation or rotation
Y10T 137/86558	. . . . .	Plural noncommunicating flow paths
Y10T 137/86566	. . . . .	Rotary plug
Y10T 137/86574	. . . . .	Supply and exhaust
Y10T 137/86582	. . . . .	Pilot-actuated
Y10T 137/8659	. . . . .	Variable orifice-type modulator
Y10T 137/86598	. . . . .	Opposed orifices; interposed modulator
Y10T 137/86606	. . . . .	Common to plural valve motor chambers
Y10T 137/86614	. . . . .	Electric
Y10T 137/86622	. . . . .	Motor-operated
Y10T 137/8663	. . . . .	Fluid motor
Y10T 137/86638	. . . . .	Rotary valve
Y10T 137/86646	. . . . .	Plug type
Y10T 137/86654	. . . . .	For plural lines
Y10T 137/86662	. . . . .	Axial and radial flow
Y10T 137/8667	. . . . .	Reciprocating valve
Y10T 137/86678	. . . . .	Combined disk or plug and gate or piston
Y10T 137/86686	. . . . .	Plural disk or plug
Y10T 137/86694	. . . . .	Piston valve
Y10T 137/86702	. . . . .	With internal flow passage
Y10T 137/8671	. . . . .	With annular passage [e.g., spool]
Y10T 137/86718	. . . . .	Dividing into parallel flow paths with recombining
Y10T 137/86726	. . . . .	Valve with bypass connections
Y10T 137/86734	. . . . .	With metering feature
Y10T 137/86743	. . . . .	Rotary
Y10T 137/86751	. . . . .	Plug
Y10T 137/86759	. . . . .	Reciprocating
Y10T 137/86767	. . . . .	Spool
Y10T 137/86775	. . . . .	With internal passage
Y10T 137/86783	. . . . .	Unequal heads
Y10T 137/86791	. . . . .	Piston
Y10T 137/86799	. . . . .	With internal flow passage
Y10T 137/86807	. . . . .	Sequential opening or closing of serial ports in single flow line
Y10T 137/86815	. . . . .	Multiple inlet with single outlet
Y10T 137/86823	. . . . .	Rotary valve
Y10T 137/86831	. . . . .	Selective opening of plural ports

Y10T 137/86839	. . .	Four port reversing valves
Y10T 137/86847	. . .	Pivoted valve unit
Y10T 137/86855	. . . .	Gate
Y10T 137/86863	. . .	Rotary valve unit
Y10T 137/86871	. . . .	Plug
Y10T 137/86879	. . .	Reciprocating valve unit
Y10T 137/86887	. . . .	Combined disk or plug and gate or piston
Y10T 137/86895	. . . .	Plural disk or plug
Y10T 137/86903	. .	Plural petcocks
Y10T 137/86911	. .	Sequential distributor or collector type
Y10T 137/86919	. .	Sequentially closing and opening alternately seating flow controllers
Y10T 137/86928	. .	Sequentially progressive opening or closing of plural valves
Y10T 137/86936	. . .	Pressure equalizing or auxiliary shunt flow
Y10T 137/86944	. . . .	One valve seats against other valve [e.g., concentric valves]
Y10T 137/86952	. . . . .	Locomotive throttle
Y10T 137/8696	. . . . .	Gate
Y10T 137/86968	. . . . .	With balancing chamber
Y10T 137/86976	. . . . .	First valve moves second valve
Y10T 137/86984	. . . . .	Actuator moves both valves
Y10T 137/86992	. . .	With subsequent closing of first opened port
Y10T 137/87	. . . .	Simultaneously moved port controllers
Y10T 137/87008	. . .	Screw-actuated differential valves
Y10T 137/87016	. . .	Lost motion
Y10T 137/87024	. . . .	Cam determines sequence
Y10T 137/87032	. . . .	Rotary concentric valves
Y10T 137/8704	. . . .	First valve actuates second valve
Y10T 137/87048	. .	With preselecting means for plural valve actuator
Y10T 137/87056	. .	With selective motion for plural valve actuator
Y10T 137/87064	. . .	Oppositely movable cam surfaces
Y10T 137/87072	. . .	Rotation about either of two pivotal axes
Y10T 137/8708	. . .	Rotation of actuator arm about its pivot and its axis
Y10T 137/87088	. . .	Reciprocation along and rotation about same axis
Y10T 137/87096	. .	Valves with separate, correlated, actuators
Y10T 137/87105	. . .	Correlated across separable flow path joint
Y10T 137/87113	. . .	Interlocked
Y10T 137/87121	. . .	Coaxial stems
Y10T 137/87129	. . . .	Rotary
Y10T 137/87137	. . . . .	And reciprocating
Y10T 137/87145	. . . . .	Concentric, central valve removable
Y10T 137/87153	. .	Plural noncommunicating flow paths

Y10T 137/87161	. . .	With common valve operator
Y10T 137/87169	. .	Supply and exhaust
Y10T 137/87177	. . .	With bypass
Y10T 137/87185	. . . .	Controlled by supply or exhaust valve
Y10T 137/87193	. . .	Pilot-actuated
Y10T 137/87201	. . . .	Common to plural valve motor chambers
Y10T 137/87209	. . . .	Electric
Y10T 137/87217	. . .	Motor
Y10T 137/87225	. . . .	Fluid motor
Y10T 137/87233	. . .	Biased exhaust valve
Y10T 137/87241	. . . .	Biased closed
Y10T 137/87249	. .	Multiple inlet with multiple outlet
Y10T 137/87257	. .	Hydraulic brake line [e.g., hill holders]
Y10T 137/87265	. .	Dividing into parallel flow paths with recombining
Y10T 137/87273	. . .	With fluid coupling [e.g., railway car hose coupling, truck-trailer oil system coupling, etc.]
Y10T 137/87281	. . .	System having plural inlets
Y10T 137/8729	. . . .	Having digital flow controller
Y10T 137/87298	. . .	Having digital flow controller
Y10T 137/87306	. . . .	Having plural branches under common control for separate valve actuators
Y10T 137/87314	. . . . .	Electromagnetic or electric control [e.g., digital control, bistable electro control, etc.]
Y10T 137/87322	. . .	With multi way valve having serial valve in at least one branch
Y10T 137/8733	. . .	Fluid pressure regulator in at least one branch
Y10T 137/87338	. . .	Flow passage with bypass
Y10T 137/87346	. . . .	Including mixing feature
Y10T 137/87354	. . . .	Including flowmeter
Y10T 137/87362	. . . .	Including cleaning, treating, or heat transfer feature
Y10T 137/8737	. . . . .	Water treatment feature
Y10T 137/87378	. . .	Second valve assembly carried by first valve head
Y10T 137/87386	. . . .	With rotary plug having variable restrictor
Y10T 137/87394	. . . .	Carried valve is direct response valve [e.g., check valve, etc.]
Y10T 137/87402	. . .	With foam controlling means [e.g., beer, soda faucets]
Y10T 137/8741	. . .	With common operator
Y10T 137/87418	. . . .	Balanced valve
Y10T 137/87426	. . . .	Single resilient member actuates or forms plural passages
Y10T 137/87434	. . . .	Valves deform to close passage
Y10T 137/87442	. . . .	Rotary valve
Y10T 137/8745	. . . . .	Including rigid plate with flexible or resilient seal
Y10T 137/87458	. . . . .	Axes of rotation of valves intersect at point

Y10T 137/87467	. . . . .	Axes of rotation parallel
Y10T 137/87475	. . . . .	Adjacent plate valves always parallel
Y10T 137/87483	. . . . .	Adjacent plate valves counter rotate
Y10T 137/87491	. . . . .	Mechanical movement between actuator and non-rotary valve
Y10T 137/87499	. . . . .	Fluid actuated or retarded
Y10T 137/87507	. . . . .	Electrical actuator
Y10T 137/87515	. . . . .	Mechanical movement between actuator and valve
Y10T 137/87523	. . . . .	Rotary valve
Y10T 137/87531	. . . . .	Butterfly valve
Y10T 137/87539	. . . . .	Having guide or restrictor
Y10T 137/87547	. . . . .	Manually variable
Y10T 137/87555	. . . . .	Having direct response valve [e.g., check valve, etc.]
Y10T 137/87563	. . . . .	With reverse flow direction
Y10T 137/87571	. . . . .	Multiple inlet with single outlet
Y10T 137/87579	. . . . .	Faucet attachment
Y10T 137/87587	. . . . .	Combining by aspiration
Y10T 137/87595	. . . . .	Combining of three or more diverse fluids
Y10T 137/87603	. . . . .	Plural motivating fluid jets
Y10T 137/87611	. . . . .	Flow control by varying position of a fluid inlet relative to entrainment chamber
Y10T 137/87619	. . . . .	With selectively operated flow control means in inlet
Y10T 137/87627	. . . . .	Flow control means is located in aspirated fluid inlet
Y10T 137/87635	. . . . .	Single actuator operates flow control means located in both motivating fluid and aspirated fluid inlets
Y10T 137/87643	. . . . .	With condition responsive valve
Y10T 137/87652	. . . . .	With means to promote mixing or combining of plural fluids
Y10T 137/8766	. . . . .	With selectively operated flow control means
Y10T 137/87668	. . . . .	Single actuator operates plural flow control means
Y10T 137/87676	. . . . .	With flow control
Y10T 137/87684	. . . . .	Valve in each inlet
Y10T 137/87692	. . . . .	With common valve operator
Y10T 137/877	. . . . .	With flow control means for branched passages
Y10T 137/87708	. . . . .	With common valve operator
Y10T 137/87716	. . . . .	For valve having a flexible diaphragm valving member
Y10T 137/87724	. . . . .	For valve having a ball head
Y10T 137/87732	. . . . .	With gearing
Y10T 137/8774	. . . . .	Threaded actuator
Y10T 137/87748	. . . . .	Pivoted or rotary motion converted to reciprocating valve head motion
Y10T 137/87756	. . . . .	Spring biased
Y10T 137/87764	. . . . .	Having fluid actuator

Y10T 137/87772	. . . .	With electrical actuation
Y10T 137/8778	. . . .	Spring biased
Y10T 137/87788	. . .	With valve or movable deflector at junction
Y10T 137/87796	. . . .	Movable deflector spout in lateral port
Y10T 137/87804	. . . .	Valve or deflector is tubular passageway
Y10T 137/87812	. . . .	Pivoted valve or deflector
Y10T 137/8782	. . . .	Rotary valve or deflector
Y10T 137/87829	. . .	Biased valve
Y10T 137/87837	. . . .	Spring bias
Y10T 137/87845	. . . . .	For valve having a ball head
Y10T 137/87853	. . . . .	With threaded actuator
Y10T 137/87861	. . . . .	Spring coaxial with valve
Y10T 137/87869	. . . . .	Biased open
Y10T 137/87877	. . .	Single inlet with multiple distinctly valved outlets
Y10T 137/87885	. . .	Sectional block structure
Y10T 137/87893	. . .	With fluid actuator
Y10T 137/87901	. . .	With threaded actuator
Y10T 137/87909	. . .	Containing rotary valve
Y10T 137/87917	. .	Flow path with serial valves and/or closures
Y10T 137/87925	. . .	Separable flow path section, valve or closure in each
Y10T 137/87933	. . . .	Common joint and valve seat faces, or sections joined by closing members
Y10T 137/87941	. . . .	Each valve and/or closure operated by coupling motion
Y10T 137/87949	. . . . .	Linear motion of flow path sections operates both
Y10T 137/87957	. . . . .	Valves actuate each other
Y10T 137/87965	. . . .	Valve- or closure-operated by coupling motion
Y10T 137/87973	. . . .	Coupling interlocked with valve, or closure or actuator
Y10T 137/87981	. . .	Common actuator
Y10T 137/87989	. . . .	Delivery cock with terminal valve
Y10T 137/87997	. . . .	Alternately seating
Y10T 137/88005	. . . . .	Biased valve
Y10T 137/88014	. . . .	Opposed screw
Y10T 137/88022	. . .	One valve head provides seat for other head
Y10T 137/8803	. . . .	Also carries head of other valve
Y10T 137/88038	. . .	One valve head carries other valve head
Y10T 137/88046	. . .	Biased valve with external operator
Y10T 137/88054	. . .	Direct response normally closed valve limits direction of flow
Y10T 137/88062	. . .	Coaxial oppositely directed seats
Y10T 137/8807	. .	Articulated or swinging flow conduit
Y10T 137/88078	. . .	Actuates valve

Y10T 137/88086	. . . . Plural motions of valve
Y10T 137/88094	. . . . Reciprocating valve
Y10T 137/88102	. . . . Rotary valve
Y10T 137/8811	. Frangible
Y10T 137/9029	. With coupling
Y10T 137/9138	. . Flexible
Y10T 137/9247	. With closure
Y10T 137/9464	. Faucets and spouts
Y10T 137/9682	. Miscellaneous

Former US Class 152 Series

Y10T 152/00	Resilient tires and wheels
Y10T 152/10	. Tires, resilient
Y10T 152/10009	. . Emergency
Y10T 152/10018	. . with splash guards
Y10T 152/10027	. . with wear indicating feature
Y10T 152/10036	. . Cushion and pneumatic combined
Y10T 152/10045	. . . Metallic spring cushion
Y10T 152/10054	. . . Enclosed cushion
Y10T 152/10063	. . . Superimposed
Y10T 152/10072	. . . . Plungers
Y10T 152/10081	. . . . Edge-secured cushion
Y10T 152/1009	. . . . Guide flanges
Y10T 152/10099	. . . . . Radial stops
Y10T 152/10108	. . . . . Bolts or studs
Y10T 152/10117	. . . Integral
Y10T 152/10126	. . . . with removable inner tube
Y10T 152/10135	. . Armored
Y10T 152/10144	. . . Single tube tires internal
Y10T 152/10153	. . . . Metal
Y10T 152/10162	. . . . . Plates
Y10T 152/10171	. . . Casing construction
Y10T 152/1018	. . . . Embedded
Y10T 152/10189	. . . . . Metal
Y10T 152/10198	. . . . . Plates
Y10T 152/10207	. . . . . Annular
Y10T 152/10216	. . . . . Linked mat
Y10T 152/10225	. . . . . Woven
Y10T 152/10234	. . . Interliners

Y10T 152/10243	. . . .	Cotton, fabric, or rubber
Y10T 152/10252	. . . .	Metal
Y10T 152/10261	. . . . .	Scale armor
Y10T 152/1027	. . . . .	Annular
Y10T 152/10279	. .	Cushion
Y10T 152/10288	. . .	Sectional
Y10T 152/10297	. . . .	Annular
Y10T 152/10306	. . . . .	Superimposed
Y10T 152/10315	. . . .	Superimposed
Y10T 152/10324	. . . .	with apertured external binders
Y10T 152/10333	. . . .	Radial bolt secured
Y10T 152/10342	. . . .	Abutting sections
Y10T 152/10351	. . . . .	with annular internal binders
Y10T 152/1036	. . . . .	Interfitting
Y10T 152/10369	. . . . .	Indented at joints
Y10T 152/10378	. . .	Casing enclosed core
Y10T 152/10387	. . . .	Separate core
Y10T 152/10396	. . . . .	Removable
Y10T 152/10405	. . . . .	Sponge rubber
Y10T 152/10414	. . . . .	with core compression
Y10T 152/10423	. . . . .	Superimposed rings
Y10T 152/10432	. . . . .	Sectional transversely
Y10T 152/10441	. . . . .	Balls
Y10T 152/1045	. . . . .	Integral structure
Y10T 152/10459	. . . . .	Recessed
Y10T 152/10468	. . . . .	Chambered
Y10T 152/10477	. . . . .	Perforated
Y10T 152/10486	. . . . .	Chambered
Y10T 152/10495	. .	Pneumatic tire or inner tube
Y10T 152/10504	. . .	Asymmetric tire
Y10T 152/10513	. . .	Tire reinforcement material characterized by short length fibers or the like
Y10T 152/10522	. . .	Multiple chamber
Y10T 152/10531	. . . .	Cylinder and piston
Y10T 152/1054	. . . .	Mutually free walls
Y10T 152/10549	. . . . .	Interfitting
Y10T 152/10558	. . . . .	Balls
Y10T 152/10567	. . . . .	with simultaneous inflating means
Y10T 152/10576	. . . .	Annular chambers
Y10T 152/10585	. . . . .	with simultaneous inflating means
Y10T 152/10594	. . . . .	Mutually free walls

Y10T 152/10603	. . . . .	with simultaneous inflating means
Y10T 152/10612	. . . . .	with simultaneous inflating means
Y10T 152/10621	. . .	Sectional casings
Y10T 152/1063	. . . .	Circumferential
Y10T 152/10639	. . . . .	Rigid inner sections
Y10T 152/10648	. . .	with means restricting relative movement between tire and inner tube [e.g., anti-creep feature, etc.]
Y10T 152/10657	. . .	with means to protect inner tube from rim
Y10T 152/10666	. . .	Automatic sealing of punctures [e.g., self-healing, etc.]
Y10T 152/10675	. . . .	Using flowable coating or composition
Y10T 152/10684	. . . . .	On inner surface of tubeless tire
Y10T 152/10693	. . . . .	Sealant in plural layers or plural pockets
Y10T 152/10702	. . . . .	within or part of construction of inflating inner tube
Y10T 152/10711	. . . . .	Sealant in plural layers or plural pockets
Y10T 152/1072	. . . .	by compression
Y10T 152/10729	. . . .	with reinflating means
Y10T 152/10738	. . .	with means to protect tire from rim
Y10T 152/10747	. . .	Means other than rim closing the tire opening
Y10T 152/10756	. . . .	Positive casing closure
Y10T 152/10765	. . .	Characterized by belt or breaker structure
Y10T 152/10774	. . . .	Consisting of only one ply
Y10T 152/10783	. . . .	Reinforcing plies made up from wound narrow ribbons
Y10T 152/10792	. . . .	Structure where each bias angle reinforcing cord ply has no oppositely angled ply
Y10T 152/10801	. . . .	Structure made up of two or more sets of plies wherein the reinforcing cords in one set lie in a different angular position relative to those in other sets
Y10T 152/1081	. . . .	Breaker or belt characterized by the chemical composition or physical properties of elastomer or the like
Y10T 152/10819	. . .	Characterized by the structure of the bead portion of the tire
Y10T 152/10828	. . . .	Chafer or sealing strips
Y10T 152/10837	. . . .	Bead characterized by the radial extent of apex, flipper or chafer into tire sidewall
Y10T 152/10846	. . . .	Bead characterized by the chemical composition and or physical properties of elastomers or the like
Y10T 152/10855	. . .	Characterized by the carcass, carcass material, or physical arrangement of the carcass materials
Y10T 152/10864	. . . .	Sidewall stiffening or reinforcing means other than main carcass plies or foldups thereof about beads
Y10T 152/10873	. . . .	with two or more differing cord materials
Y10T 152/10882	. .	Patches
Y10T 152/10891	. . .	Mechanically secured

- Y10T 152/109 Inside and outside, bolt connected
- Y10T 152/10909 . . . with plugs
- Y10T 152/10918 . . . Bandages
- Y10T 152/10927 Mechanically secured
- Y10T 152/10936 to felly or rim

Former US Class 156 Series

Y10T 156/00

Adhesive bonding and miscellaneous chemical manufacture

- Y10T 156/10 . Methods of surface bonding and/or assembly therefor
- Y10T 156/1002 . . with permanent bending or reshaping or surface deformation of self sustaining lamina
- Y10T 156/1003 . . . by separating laminae between spaced secured areas [e.g., honeycomb expanding]
- Y10T 156/1005 . . . by inward collapsing of portion of hollow body
- Y10T 156/1007 . . . Running or continuous length work
- Y10T 156/1008 Longitudinal bending
- Y10T 156/101 Prior to or during assembly with additional lamina
- Y10T 156/1011 Overedge bending or overedge folding
- Y10T 156/1013 and edge-joining of one piece blank to form tube
- Y10T 156/1015 Folding
- Y10T 156/1016 Transverse corrugating
- Y10T 156/1018 Subsequent to assembly of laminae
- Y10T 156/102 with deformation or cutting of corrugated lamina
- Y10T 156/1021 Treating material of corrugated lamina or dry adhesive thereon to render tacky
- Y10T 156/1023 Surface deformation only [e.g., embossing]
- Y10T 156/1025 . . . to form undulated to corrugated sheet and securing to base with parts of shaped areas out of contact
- Y10T 156/1026 . . . with slitting or removal of material at reshaping area prior to reshaping
- Y10T 156/1028 . . . by bending, drawing or stretch forming sheet to assume shape of configured lamina while in contact therewith
- Y10T 156/103 Encasing or enveloping the configured lamina
- Y10T 156/1031 with preshaping of lamina
- Y10T 156/1033 Flexible sheet to cylinder lamina
- Y10T 156/1034 . . . Overedge bending of lamina about edges of sheetlike base
- Y10T 156/1036 . . . Bending of one piece blank and joining edges to form article
- Y10T 156/1038 Hollow cylinder article
- Y10T 156/1039 . . . Surface deformation only of sandwich or lamina [e.g., embossed panels]
- Y10T 156/1041 Subsequent to lamination
- Y10T 156/1043 . . . Subsequent to assembly
- Y10T 156/1044 of parallel stacked sheets only

Y10T 156/1046	. . . . .	Bending of one lamina only
Y10T 156/1048	. . . . .	to form dished or receptacle-like product
Y10T 156/1049	. . . . .	Folding only
Y10T 156/1051	. . . . .	by folding
Y10T 156/1052	. . . . .	with cutting, punching, tearing or severing
Y10T 156/1054	. . . . .	and simultaneously bonding [e.g., cut-seaming]
Y10T 156/1056	. . . . .	Perforating lamina
Y10T 156/1057	. . . . .	Subsequent to assembly of laminae
Y10T 156/1059	. . . . .	Splitting sheet lamina in plane intermediate of faces
Y10T 156/1061	. . . . .	Spiral peeling
Y10T 156/1062	. . . . .	Prior to assembly
Y10T 156/1064	. . . . .	Partial cutting [e.g., grooving or incising]
Y10T 156/1066	. . . . .	Cutting to shape joining edge surfaces only
Y10T 156/1067	. . . . .	Continuous longitudinal slitting
Y10T 156/1069	. . . . .	Bonding face to face of laminae cut from single sheet
Y10T 156/107	. . . . .	Punching and bonding pressure application by punch
Y10T 156/1072	. . . . .	Closure cap liner applying type
Y10T 156/1074	. . . . .	Separate cutting of separate sheets or webs
Y10T 156/1075	. . . . .	of plural laminae from single stock and assembling to each other or to additional lamina
Y10T 156/1077	. . . . .	Applying plural cut laminae to single face of additional lamina
Y10T 156/1079	. . . . .	Joining of cut laminae end-to-end
Y10T 156/108	. . . . .	Flash, trim or excess removal
Y10T 156/1082	. . . . .	Partial cutting bonded sandwich [e.g., grooving or incising]
Y10T 156/1084	. . . . .	of continuous or running length bonded web
Y10T 156/1085	. . . . .	One web only
Y10T 156/1087	. . . . .	Continuous longitudinal slitting
Y10T 156/1089	. . . . .	of discrete laminae to single face of additional lamina
Y10T 156/109	. . . . .	Embedding of laminae within face of additional laminae
Y10T 156/1092	. . . . .	All laminae planar and face to face
Y10T 156/1093	. . . . .	with covering of discrete laminae with additional lamina
Y10T 156/1095	. . . . .	Opposed laminae are running length webs
Y10T 156/1097	. . . . .	Lamina is running length web
Y10T 156/1098	. . . . .	Feeding of discrete laminae from separate sources
Y10T 156/11	. . . . .	Methods of delaminating, <u>per se</u> ; i.e. , separating at bonding face
Y10T 156/1105	. . . . .	Delaminating process responsive to feed or shape at delamination
Y10T 156/1111	. . . . .	Using solvent during delaminating [e.g., water dissolving adhesive at bonding face during delamination, etc.]
Y10T 156/1116	. . . . .	Using specified organic delamination solvent
Y10T 156/1121	. . . . .	Using vibration during delaminating

- Y10T 156/1126 . . Using direct fluid current against work during delaminating
- Y10T 156/1132 . . . Using vacuum directly against work during delaminating
- Y10T 156/1137 . . . Using air blast directly against work during delaminating
- Y10T 156/1142 . . Changing dimension during delaminating [e.g., crushing, expanding, warping, etc.]
- Y10T 156/1147 . . . Using shrinking or swelling agent during delaminating
- Y10T 156/1153 . . Temperature change for delamination [e.g., heating during delaminating, etc.]
- Y10T 156/1158 . . . Electromagnetic radiation applied to work for delamination [e.g., microwave, uv, ir, etc.]
- Y10T 156/1163 . . . Sintering for delamination
- Y10T 156/1168 . . Gripping and pulling work apart during delaminating
- Y10T 156/1174 . . . Using roller for delamination [e.g., roller pairs operating at differing speeds or directions, etc.]
- Y10T 156/1179 . . . with poking during delaminating [e.g., jabbing, etc.]
- Y10T 156/1184 Piercing layer during delaminating [e.g., cutting, etc.]
- Y10T 156/1189 . . . with shearing during delaminating
- Y10T 156/1195 . . . Delaminating from release surface
- Y10T 156/12 . . Surface bonding means and/or assembly means with cutting, punching, piercing, severing or tearing
- Y10T 156/125 . . Plural severing means each acting on a different work piece
- Y10T 156/13 . . Severing followed by associating with part from same source
- Y10T 156/1304 . . Means making hole or aperture in part to be laminated
- Y10T 156/1309 . . . and securing separate part over hole or aperture
- Y10T 156/1313 . . Cutting element simultaneously bonds [e.g., cut seaming]
- Y10T 156/1317 . . Means feeding plural workpieces to be joined
- Y10T 156/1322 . . . Severing before bonding or assembling of parts
- Y10T 156/1326 Severing means or member secured thereto also bonds
- Y10T 156/133 Delivering cut part to indefinite or running length web
- Y10T 156/1335 Cutter also delivers cut piece
- Y10T 156/1339 Delivering cut part in sequence to serially conveyed articles
- Y10T 156/1343 . . . Cutting indefinite length web after assembly with discrete article
- Y10T 156/1348 . . Work traversing type
- Y10T 156/1352 . . . with liquid applying means
- Y10T 156/1357 Slitting and severing
- Y10T 156/1361 Cutting after bonding
- Y10T 156/1365 . . . Fixed cutter
- Y10T 156/137 . . Stamp from multiple row sheet type
- Y10T 156/1374 . . with means projecting fluid against work
- Y10T 156/1378 . . Cutter actuated by or secured to bonding element
- Y10T 156/1383 . . . with liquid applicator

Y10T 156/1387	. . . . Common actuator for bonding and liquid applying means
Y10T 156/1391	. . . . . Liquid applied to web before cutting
Y10T 156/1396	. . . . . Roller applicator
Y10T 156/14	. Surface bonding means and/or assembly means with shaping, scarifying, or cleaning joining surface only
Y10T 156/15	. Combined or convertible surface bonding means and/or assembly means
Y10T 156/16	. Surface bonding means and/or assembly means with bond interfering means [slip sheet, etc.]
Y10T 156/17	. Surface bonding means and/or assembly means with work feeding or handling means
Y10T 156/1702	. . For plural parts or plural areas of single part
Y10T 156/1705	. . . Lamina transferred to base from adhered flexible web or sheet type carrier
Y10T 156/1707	. . . . Discrete spaced laminae on adhered carrier
Y10T 156/171	. . . . . Means serially presenting discrete base articles or separate portions of a single article
Y10T 156/1712	. . . Indefinite or running length work
Y10T 156/1715	. . . . Means joining indefinite length work edge to edge
Y10T 156/1717	. . . . . Means applying adhesively secured tape to seam
Y10T 156/172	. . . . . Means applying fluid adhesive to work edge
Y10T 156/1722	. . . . Means applying fluent adhesive or adhesive activator material between layers
Y10T 156/1724	. . . . . At spaced areas
Y10T 156/1727	. . . . . Plural indefinite length or running length workpieces
Y10T 156/1729	. . . . . Fluid applied to nip between indefinite length webs
Y10T 156/1732	. . . . . Fluid applied to plural workpieces
Y10T 156/1734	. . . . Means bringing articles into association with web
Y10T 156/1737	. . . . Discontinuous, spaced area, and/or patterned pressing
Y10T 156/1739	. . . . Webs of different width, longitudinally aligned
Y10T 156/1741	. . . . Progressive continuous bonding press [e.g., roll couples]
Y10T 156/1744	. . . Means bringing discrete articles into assembled relationship
Y10T 156/1746	. . . . Plural lines and/or separate means assembling separate sandwiches
Y10T 156/1749	. . . . All articles from single source only
Y10T 156/1751	. . . . At least three articles
Y10T 156/1754	. . . . . At least two applied side by side to common base
Y10T 156/1756	. . . . . Plural ranks
Y10T 156/1759	. . . . . Sheet form common base
Y10T 156/1761	. . . . . Stacked serially
Y10T 156/1763	. . . . Magazine stack directly contacting separate work
Y10T 156/1766	. . . . . Magazine movable to work
Y10T 156/1768	. . . . Means simultaneously conveying plural articles from a single source and serially presenting them to an assembly station

Y10T 156/1771	. . . . . Turret or rotary drum-type conveyor
Y10T 156/1773	. . . . . For flexible sheets
Y10T 156/1776	. . . . . Means separating articles from bulk source
Y10T 156/1778	. . . . . Stacked sheet source
Y10T 156/178	. . . . . Rotary or pivoted picker
Y10T 156/1783	. . . . . Translating picker
Y10T 156/1785	. . Magazine stack directly contacting work
Y10T 156/1788	. . Work traversing type and/or means applying work to wall or static structure
Y10T 156/179	. . . with liquid applying means
Y10T 156/1793	. . . Grip or clamp for web end
Y10T 156/1795	. . . Implement carried web supply
Y10T 156/1798	. . with liquid adhesive or adhesive activator applying means
Y10T 156/18	. Surface bonding means and/or assembly means with handle or handgrip
Y10T 156/19	. Delaminating means
Y10T 156/1906	. . Delaminating means responsive to feed or shape at delamination
Y10T 156/1911	. . Heating or cooling delaminating means [e.g., melting means, freezing means, etc.]
Y10T 156/1917	. . . Electromagnetic radiation delaminating means [e.g., microwave, uv, ir, etc.]
Y10T 156/1922	. . Vibrating delaminating means
Y10T 156/1928	. . Differential fluid pressure delaminating means
Y10T 156/1933	. . . Spraying delaminating means [e.g., atomizer, etc.]
Y10T 156/1939	. . . . Air blasting delaminating means
Y10T 156/1944	. . . Vacuum delaminating means [e.g., vacuum chamber, etc.]
Y10T 156/195	. . Delaminating roller means
Y10T 156/1956	. . . Roller pair delaminating means
Y10T 156/1961	. . Severing delaminating means [e.g., chisel, etc.]
Y10T 156/1967	. . . Cutting delaminating means
Y10T 156/1972	. . . . Shearing delaminating means
Y10T 156/1978	. . Delaminating bending means
Y10T 156/1983	. . . Poking delaminating means
Y10T 156/1989	. . . Corner edge bending delaminating means
Y10T 156/1994	. . Means for delaminating from release surface

Former US Class 225 series

Y10T 225/00	Severing by tearing or breaking
Y10T 225/10	. Methods
Y10T 225/12	. . With preliminary weakening
Y10T 225/14	. . Longitudinally of direction of feed
Y10T 225/16	. . Transversely of continuously fed work

Y10T 225/18	. . . Progressively to or from one side edge
Y10T 225/20	. Severing by manually forcing against fixed edge
Y10T 225/201	. . With other type severing means
Y10T 225/202	. . With timer-released means for preventing work feed-out
Y10T 225/203	. . Including means to effect bias cut
Y10T 225/205	. . With feed-out of predetermined length from work supply
Y10T 225/206	. . . Including means to select or adjust feed-out length
Y10T 225/207	. . . Including feed-out stop for manually pulled work
Y10T 225/208	. . . . Stop abuts work edge or work-mounted article
Y10T 225/209	. . . . With feed-out of lead-end to aid initial grasping
Y10T 225/21	. . . Merely to provide lead-end for manual grasping
Y10T 225/211	. . . Manually operated feed-out mechanism
Y10T 225/213	. . With indicator
Y10T 225/214	. . . Indicates length to be severed from supply
Y10T 225/215	. . With blade-edge guard
Y10T 225/216	. . . Movable
Y10T 225/217	. . Work stripped from blade by relatively movable means
Y10T 225/218	. . . Including movable blade
Y10T 225/22	. . With means to move work toward or into severing position
Y10T 225/221	. . . With means to strip adhering work therefrom
Y10T 225/222	. . With work-immobilizing paster surface
Y10T 225/223	. . . With finger-access opening
Y10T 225/224	. . With means to hold pad or stack of individual sheets
Y10T 225/225	. . . With means to separate severed end of stub from supply package
Y10T 225/226	. . . With changeable blade-edge contour
Y10T 225/228	. . . . Slidable notcher
Y10T 225/229	. . . Blade slidable along plane of work surface
Y10T 225/23	. . Zigzag-folded supply package
Y10T 225/231	. . Separate blades usable alternatively or sequentially on same work supply
Y10T 225/232	. . Plural supply sources
Y10T 225/233	. . . On turret-type support with single blade
Y10T 225/234	. . . With movable blade registrable selectively with each source
Y10T 225/236	. . . With plural blades
Y10T 225/237	. . . . With individual blade for each source
Y10T 225/238	. . With housing for work supply
Y10T 225/239	. . . Liquid-, gas-, or light-tight work passage
Y10T 225/24	. . . With inspection window or transparent panel
Y10T 225/241	. . . With mounting means for housing
Y10T 225/243	. . . Blade on pivoted closure for housing
Y10T 225/244	. . . Sectional telescoping housing

Y10T 225/245	. . . .	Including removable cap or sleeve enclosure for spooled work supply
Y10T 225/246	. . .	Including special support for wound supply package
Y10T 225/247	. . . .	Bearing or trunnions to engage package core
Y10T 225/248	. . .	Single blank container
Y10T 225/249	. . . .	Blade unitary with container
Y10T 225/251	. . . .	With closure fastener
Y10T 225/252	. . .	With brake or tensioner
Y10T 225/253	. . . .	Restricted or restrictable work outlet
Y10T 225/254	. . .	With finger-access opening to facilitate work feed-out
Y10T 225/255	. . .	With internal guide
Y10T 225/256	. .	Blade carrier bodily and slidably supported on running length work
Y10T 225/257	. .	Blade mounted on hand-held wound package
Y10T 225/259	. . .	With lead-end stripper for tacky adhesive work
Y10T 225/26	. . .	By resiliently embracing outer circumference of package
Y10T 225/261	. . .	Work supply nonrotatably wound on flanged spool
Y10T 225/262	. . . .	Circumferentially movable blade radially retained by beaded or grooved flanges
Y10T 225/263	. . . .	Blade carrier supports hollow spool for rotation
Y10T 225/264	. . . .	Flange edge notched to provide or coact with cutter
Y10T 225/266	. . . .	With clamp for lead-end of strand-type work
Y10T 225/267	. . . . .	Strand clamped against flange
Y10T 225/268	. . .	By resiliently engaging package ends or interior of core
Y10T 225/269	. . .	Blade carrier supports package for rotation
Y10T 225/27	. .	Movable blade continually biased toward wound web supply package
Y10T 225/271	. . .	Including temporary bias-disabling means
Y10T 225/272	. . .	Including stripper to separate lead-end from package
Y10T 225/274	. . .	Weight of bodily movable package contributes to blade-biasing force
Y10T 225/275	. . .	Blade slidably guided
Y10T 225/276	. .	Blade movable to severing position by moving work
Y10T 225/277	. . .	With simultaneous application of brake or clamp
Y10T 225/278	. . . .	Applied to running length work
Y10T 225/279	. . . . .	Opposed movable jaws
Y10T 225/28	. .	Wound package bodily biased toward fixed blade
Y10T 225/282	. .	With fixed blade and support for wound package
Y10T 225/283	. . .	Body- or belt-attached
Y10T 225/284	. . .	With brake applied to supply package
Y10T 225/285	. . .	With guide spaced from blade edge to provide lead-end therebetween
Y10T 225/286	. .	With work-abutment stop
Y10T 225/287	. .	With brake or clamp
Y10T 225/289	. . .	Thread cutter and clamp attachment for sewing machine presser foot

Y10T 225/29	. . . Applied to running length work
Y10T 225/291	. . . . Spaced from blade edge to provide lead-end therebetween
Y10T 225/292	. . . . . Blade manually movable to expose lead-end
Y10T 225/293	. . . Manually applied, spring returned
Y10T 225/294	. . With guide for running length work
Y10T 225/295	. . Blade manually movable to or from severing position
Y10T 225/297	. . With means to facilitate lead-end grasping
Y10T 225/298	. . Blades or severing devices
Y10T 225/299	. . . Adjustable blade-edge contour
Y10T 225/30	. Breaking or tearing apparatus
Y10T 225/304	. . Including means to apply thermal shock to work
Y10T 225/307	. . Combined with preliminary weakener or with nonbreaking cutter
Y10T 225/314	. . . Successively actuated sharp and dull tools
Y10T 225/321	. . . Preliminary weakener
Y10T 225/325	. . . . With means to apply moment of force to weakened work
Y10T 225/329	. . Plural breakers
Y10T 225/336	. . Conveyor diverter for moving work
Y10T 225/343	. . . Plural divergent work paths
Y10T 225/35	. . Work-parting pullers [burstors]
Y10T 225/357	. . . Relatively movable clamps
Y10T 225/364	. . Axial twistors
Y10T 225/371	. . Movable breaking tool
Y10T 225/379	. . . Breaking tool intermediate spaced work supports
Y10T 225/386	. . . . Clamping supports
Y10T 225/393	. . Web restrainer

Former US Class 279 Series

Y10T 279/00	Chucks or sockets
Y10T 279/10	. Expanding
Y10T 279/1004	. . Collet type
Y10T 279/1008	. . . Fixed jaws and moving cam
Y10T 279/1012	. . . Fixed cam and moving jaws
Y10T 279/1016	. . Jaws mounted on flexible member; i.e., diaphragm
Y10T 279/1021	. . Fluid-pressure actuator
Y10T 279/1024	. . . Directly expanding jaws
Y10T 279/1029	. . . . Jaw is expansible chamber; i.e., bladder type
Y10T 279/1033	. . . Expanding jaws via mechanical connection
Y10T 279/1037	. . Axially moving actuator
Y10T 279/1041	. . . Wedge

Y10T 279/1045	. . . . Internal cone
Y10T 279/1049	. . . . with jaw positively interlocked with wedge; e.g., dovetail or T-slot
Y10T 279/1054	. . . . with resilient means contacting nonresilient jaw
Y10T 279/1058	. . . . . Constricting band, annulus, or clip
Y10T 279/1062	. . . Toggle
Y10T 279/1066	. . . Axially compressible element expands radially
Y10T 279/1071	. . . Lever
Y10T 279/1074	. . Rotary actuator
Y10T 279/1079	. . . Clutch or self-actuating type
Y10T 279/1083	. . Jaw structure
Y10T 279/1087	. . . Resilient
Y10T 279/1091	. . . Ball or roller
Y10T 279/1095	. . . Pivoted
Y10T 279/11	. Vacuum
Y10T 279/12	. with fluid-pressure actuator
Y10T 279/1208	. . with measuring, indicating or control means
Y10T 279/1216	. . Jaw is expansible chamber; i.e., bladder type
Y10T 279/1224	. . Pneumatic type
Y10T 279/1233	. . Jaws mounted on flexible member; i.e., diaphragm
Y10T 279/1241	. . Socket type
Y10T 279/1249	. . . Collet
Y10T 279/1258	. . . . Fixed cam and moving jaws
Y10T 279/1266	. . . . Moving cam and fixed jaws
Y10T 279/1274	. . Radially reciprocating jaws
Y10T 279/1283	. . . Fluid pressure directly moves jaws
Y10T 279/1291	. . . Fluid pressure moves jaws via mechanical connection
Y10T 279/13	. Angularly adjustable or indexing
Y10T 279/14	. Eccentric
Y10T 279/15	. Threaded grip
Y10T 279/16	. Longitudinal screw clamp
Y10T 279/17	. Socket type
Y10T 279/17008	. . Multiple alternative
Y10T 279/17017	. . Self-centering of floating
Y10T 279/17025	. . . Radially reciprocating jaws
Y10T 279/17034	. . . Transverse holder and setscrew
Y10T 279/17042	. . Lost motion
Y10T 279/17051	. . . Swinging external yoke or detent
Y10T 279/17059	. . . . Rotary socket
Y10T 279/17068	. . . Rotary socket
Y10T 279/17076	. . . Spreading elements

Y10T 279/17085	. . .	Key retainer
Y10T 279/17094	. . .	Sleeve type retainer
Y10T 279/17102	. . . .	Sleeve in socket
Y10T 279/17111	. .	Fluid-conduit drill holding
Y10T 279/17119	. .	Feed type
Y10T 279/17128	. .	Self-grasping
Y10T 279/17136	. . .	Yielding grasping jaws
Y10T 279/17145	. . . .	Ball or roller
Y10T 279/17153	. . . .	Spring jaws
Y10T 279/17162	. . .	Yielding detent
Y10T 279/17171	. . .	One-way-clutch type
Y10T 279/17179	. . . .	Wedge
Y10T 279/17188	. . . .	Side detent
Y10T 279/17196	. . . . .	Ball or roller
Y10T 279/17205	. .	Conical clamp threaded in socket
Y10T 279/17213	. .	Transversely oscillating jaws
Y10T 279/17222	. . .	Screw actuated
Y10T 279/17231	. .	Pivoted jaws
Y10T 279/17239	. . .	Moving-cam actuator
Y10T 279/17247	. . . .	Threaded cam sleeve
Y10T 279/17256	. . . .	Reciprocating cam sleeve
Y10T 279/17264	. . .	Fixed cam and moving jaws
Y10T 279/17273	. . . .	Axial screw actuator
Y10T 279/17282	. . . .	Threaded-sleeve actuator
Y10T 279/17291	. .	Resilient split socket
Y10T 279/17299	. . .	Threaded cam sleeve
Y10T 279/17307	. . .	Reciprocating cam sleeve
Y10T 279/17316	. . .	Unitary
Y10T 279/17324	. . . .	Split at one end only
Y10T 279/17333	. . . . .	Transverse screw actuator
Y10T 279/17341	. . . . .	Cam actuator
Y10T 279/17351	. . . .	Split end to end
Y10T 279/17358	. . . .	with jaw pads or insert
Y10T 279/17367	. . .	Nonresilient member biased by a resilient member
Y10T 279/17376	. . .	Resilient member reinforced by another resilient member
Y10T 279/17384	. .	with means to exclude contaminants; e.g., seal, shield
Y10T 279/17393	. .	One movable side
Y10T 279/17401	. . .	Sleeved
Y10T 279/17411	. .	Spring biased jaws
Y10T 279/17418	. . .	Unitary

Y10T 279/17427	. . . .	Split at one end only
Y10T 279/17435	. . . .	Split at both ends
Y10T 279/17444	. . . .	Split end to end
Y10T 279/17452	. . . .	with jaw pads or insert
Y10T 279/17461	. . .	Nonresilient member biased by a resilient member
Y10T 279/17471	. . .	Resilient member reinforced by another resilient member
Y10T 279/17478	. . .	with means to exclude contaminants; e.g., seal, shield
Y10T 279/17487	. . .	Moving-cam actuator
Y10T 279/17495	. . . .	Threaded sleeve and wedge
Y10T 279/17504	. . . .	Threaded cam sleeve
Y10T 279/17512	. . . . .	Loose jaws
Y10T 279/17521	. . . .	Reciprocating cam sleeve
Y10T 279/17529	. . .	Fixed cam and moving jaws
Y10T 279/17538	. . . .	Threaded-sleeve actuator
Y10T 279/17547	. . . .	Axial screw actuator
Y10T 279/17555	. . .	Loose jaws
Y10T 279/17564	. .	Loose jaws
Y10T 279/17572	. . .	Moving-cam actuator
Y10T 279/17581	. . . .	Threaded cam sleeve
Y10T 279/17589	. . . .	Reciprocating cam sleeve
Y10T 279/17598	. . .	Fixed cam and moving jaws
Y10T 279/17606	. . . .	Threaded sleeve and body
Y10T 279/17615	. .	Obliquely guided reciprocating jaws
Y10T 279/17623	. . .	Threaded sleeve and jaw
Y10T 279/17632	. . . .	Conical sleeve
Y10T 279/17641	. . .	Threaded central cone and jaw
Y10T 279/17649	. . .	Threaded sleeve and body
Y10T 279/17658	. . .	Reciprocating jaw advancing sleeve
Y10T 279/17666	. .	Radially reciprocating jaws
Y10T 279/17675	. . .	Transverse-screw actuated
Y10T 279/17683	. . . .	Interlaced jaws
Y10T 279/17692	. . .	Moving-cam actuator
Y10T 279/17701	. . . .	Threaded cam sleeve
Y10T 279/17709	. . . .	Threaded sleeve and wedge
Y10T 279/17717	. . . .	Rotary eccentric-cam sleeve
Y10T 279/17726	. . . . .	Roller and rocking jaw
Y10T 279/17735	. . . . .	Worm actuated
Y10T 279/17743	. . . .	Reciprocating cam sleeve
Y10T 279/17752	. . . . .	Ball or roller jaws
Y10T 279/17761	. .	Side detent

Y10T 279/17769	. . .	Pivoted or rotary
Y10T 279/17777	. . . .	Sleeved
Y10T 279/17786	. . .	Spring
Y10T 279/17794	. . . .	Sleeved
Y10T 279/17803	. . .	Rotary cam sleeve
Y10T 279/17811	. . .	Reciprocating sleeve
Y10T 279/17821	. . .	Set screw
Y10T 279/17829	. . .	U-clamp
Y10T 279/17837	. . .	Plural bolt
Y10T 279/17846	. . .	Single transverse bolt
Y10T 279/17854	. . .	Longitudinal clamping wedge
Y10T 279/17863	. .	Shouldered-tang holding
Y10T 279/17871	. . .	Cap
Y10T 279/17881	. . . .	Screw
Y10T 279/17888	. .	Tang offset within socket
Y10T 279/17897	. .	Tang offset without socket
Y10T 279/17905	. .	Bottomless
Y10T 279/17914	. . .	Friction grip
Y10T 279/17923	. .	Transverse pin
Y10T 279/17931	. .	Screw threaded
Y10T 279/17941	. . .	Nut lock
Y10T 279/17948	. . . .	Threaded sleeve
Y10T 279/17957	. .	Friction grip
Y10T 279/17965	. . .	Drill type
Y10T 279/17974	. .	Barbed or pronged tang
Y10T 279/17982	. .	Molded or cast-in tang
Y10T 279/17991	. .	Adjustable length or size
Y10T 279/18	. .	Pivoted jaw
Y10T 279/182	. .	Cam-sleeve actuated
Y10T 279/185	. .	Internal-cone actuated
Y10T 279/188	. .	Toggle actuated
Y10T 279/19	. .	Radially reciprocating jaws
Y10T 279/1906	. .	with indicator
Y10T 279/1913	. .	Transverse-screw actuated
Y10T 279/1921	. . .	Annular rack
Y10T 279/1926	. .	Spiral cam or scroll actuated
Y10T 279/1933	. . .	Worm
Y10T 279/1941	. . .	Bevel pinion
Y10T 279/1946	. .	Rack-and-pinion actuated
Y10T 279/1953	. .	Toggle actuated

- Y10T 279/1961 . . Lever actuated
- Y10T 279/1966 . . . Internal cone
- Y10T 279/1973 . . Wedge actuated
- Y10T 279/1981 . . External-cone actuated
- Y10T 279/1986 . . Jaws
- Y10T 279/1993 . . . with means to facilitate jaw removal
- Y10T 279/20 . with safety feature
- Y10T 279/21 . with measuring, indicating or control means
- Y10T 279/22 . Double acting
- Y10T 279/23 . with magnetic or electrostatic means
- Y10T 279/24 . by centrifugal force
- Y10T 279/243 . . to counterbalance jaws
- Y10T 279/247 . . to grip tool or workpiece
- Y10T 279/25 . Compensation for eccentricity
- Y10T 279/26 . with centering means
- Y10T 279/27 . Separate chuck-actuating power source
- Y10T 279/275 . . Self-contained
- Y10T 279/28 . for gear or spline molding
- Y10T 279/29 . More than one set of gripping means
- Y10T 279/30 . Torsion mandrel
- Y10T 279/31 . Jaws mounted on flexible member; i.e. , diaphragm
- Y10T 279/32 . Means to prevent jaw loosening
- Y10T 279/33 . Member applies axial force component
- Y10T 279/34 . Accessory or component
- Y10T 279/3406 . . Adapter
- Y10T 279/3412 . . . Drive conversion
- Y10T 279/3418 . . . for particular tool or workpiece
- Y10T 279/3425 . . Sliding cam chuck actuator
- Y10T 279/3431 . . Chuck key
- Y10T 279/3437 . . . Safety feature; e.g., ejector, interlock
- Y10T 279/3443 . . . Key holding or attaching means
- Y10T 279/3451 . . . Nonseparable or built-in
- Y10T 279/3456 . . Padded or cushioned jaw
- Y10T 279/3462 . . Jaw insert
- Y10T 279/3468 . . . Machinable jaw
- Y10T 279/3475 Locking or positioning means
- Y10T 279/3481 . . Tool or workpiece ejector
- Y10T 279/3487 . . Tool or work stop or locator
- Y10T 279/3493 . . Protection means; e.g., cover, seal, overstress prevention, air blast
- Y10T 279/35 . Miscellaneous

Former US Class 292 series**Y10T 292/00****Closure fasteners**

Y10T 292/03	. Miscellaneous
Y10T 292/06	. Adjustable backset
Y10T 292/08	. Bolts
Y10T 292/0801	. . Multiple
Y10T 292/0802	. . . Sliding and rotary
Y10T 292/0803	. . . Sliding and swinging
Y10T 292/0805	. . . . Combined motion
Y10T 292/0806	. . . . . Lever-operating means
Y10T 292/0807	. . . Sliding and hooked end
Y10T 292/0808	. . . Sliding and roller
Y10T 292/0809	. . . Sliding and spring arm
Y10T 292/081	. . . Swinging and hooked end
Y10T 292/0811	. . . Swinging and roller
Y10T 292/0813	. . . Swinging and spring arm
Y10T 292/0814	. . . Double acting
Y10T 292/0815	. . . . Roller
Y10T 292/0816	. . . . Sliding
Y10T 292/0817	. . . . Spring arm
Y10T 292/0818	. . . . Swinging
Y10T 292/082	. . . Spring arm
Y10T 292/0821	. . . . Combined motion
Y10T 292/0822	. . . Emergency operating means
Y10T 292/0823	. . . Gear
Y10T 292/0824	. . . Roller
Y10T 292/0825	. . . Hooked end
Y10T 292/0826	. . . . Operating means
Y10T 292/0828	. . . . . Link and lever
Y10T 292/0829	. . . . . Cam
Y10T 292/083	. . . . . Flexible
Y10T 292/0831	. . . . . Lever
Y10T 292/0832	. . . . . Push or pull rod
Y10T 292/0833	. . . . . Rigid
Y10T 292/0834	. . . Sliding
Y10T 292/0836	. . . . Operating means
Y10T 292/0837	. . . . . Cam and lever
Y10T 292/0838	. . . . . Lever and push or pull rod

Y10T 292/0839	. . . . .	Link and lever
Y10T 292/084	. . . . .	Cam
Y10T 292/0841	. . . . .	Flexible
Y10T 292/0843	. . . . .	Gear
Y10T 292/0844	. . . . .	Lever
Y10T 292/0845	. . . . .	Push or pull rod
Y10T 292/0846	. . . . .	Rigid
Y10T 292/0847	. . . . .	Screw
Y10T 292/0848	. . . . .	Swinging
Y10T 292/0849	. . . . .	Operating means
Y10T 292/0851	. . . . .	Cam and lever
Y10T 292/0852	. . . . .	Link and cam
Y10T 292/0853	. . . . .	Link and lever
Y10T 292/0854	. . . . .	Cam
Y10T 292/0855	. . . . .	Flexible
Y10T 292/0856	. . . . .	Gear
Y10T 292/0857	. . . . .	Lever
Y10T 292/0859	. . . . .	Push or pull rod
Y10T 292/086	. . . . .	Rigid
Y10T 292/0861	. . . . .	Screw
Y10T 292/0862	. . . . .	Swinging and hooked end, multiple head
Y10T 292/0863	. . . . .	Sliding and rotary
Y10T 292/0864	. . . . .	Combined motion
Y10T 292/0866	. . . . .	Multiple head
Y10T 292/0867	. . . . .	Spring projected
Y10T 292/0868	. . . . .	Combined motion
Y10T 292/0869	. . . . .	Spring retracted
Y10T 292/087	. . . . .	Loops
Y10T 292/0871	. . . . .	Sliding and swinging, lever-operating means
Y10T 292/0872	. . . . .	Sliding catch
Y10T 292/0874	. . . . .	Spring-arm catch
Y10T 292/0875	. . . . .	Swinging catch
Y10T 292/0876	. . . . .	Double acting
Y10T 292/0877	. . . . .	Sliding and swinging
Y10T 292/0878	. . . . .	Sliding
Y10T 292/0879	. . . . .	Roller
Y10T 292/088	. . . . .	Spring arm
Y10T 292/0882	. . . . .	Roller
Y10T 292/0883	. . . . .	Swinging
Y10T 292/0884	. . . . .	Roller

Y10T 292/0885	. . .	Roller
Y10T 292/0886	. .	Sliding and swinging
Y10T 292/0887	. . .	Operating means
Y10T 292/0889	. . . .	Cam
Y10T 292/089	. . . .	Lever
Y10T 292/0891	. . . .	Rigid
Y10T 292/0892	. . .	Multiple head
Y10T 292/0893	. . .	Spring retracted
Y10T 292/0894	. .	Spring arm
Y10T 292/0895	. . .	Operating means
Y10T 292/0897	. . . .	Link and lever
Y10T 292/0898	. . . .	Cam
Y10T 292/0899	. . . .	Flexible
Y10T 292/09	. . . .	Lever
Y10T 292/0901	. . . .	Push or pull rod
Y10T 292/0902	. . . .	Rigid
Y10T 292/0903	. . . . .	Seal catch
Y10T 292/0905	. . . . .	Swinging catch
Y10T 292/0906	. . . .	Screw
Y10T 292/0907	. . .	Multiple head
Y10T 292/0908	. .	Emergency operating means
Y10T 292/0909	. . .	Panel
Y10T 292/091	. . .	Platform
Y10T 292/0911	. .	Hooked end
Y10T 292/0913	. . .	Sliding and swinging
Y10T 292/0914	. . . .	Operating means
Y10T 292/0915	. . . . .	Cam
Y10T 292/0916	. . . . .	Gear
Y10T 292/0917	. . . . .	Lever
Y10T 292/0918	. . . . .	Rigid
Y10T 292/092	. . . . .	Screw
Y10T 292/0921	. . .	Multiple head
Y10T 292/0922	. . . .	Operating means
Y10T 292/0923	. . . . .	Lever
Y10T 292/0924	. . . . .	Push or pull rod
Y10T 292/0925	. . . . .	Rigid
Y10T 292/0926	. . .	Spring projected
Y10T 292/0928	. . . .	Operating means
Y10T 292/0929	. . . . .	Link and lever
Y10T 292/093	. . . . .	Cam

Y10T 292/0931	. . . . .	Flexible
Y10T 292/0932	. . . . .	Lever
Y10T 292/0933	. . . . .	Push or pull rod
Y10T 292/0934	. . . . .	Rigid
Y10T 292/0936	. . . . .	Spring retracted
Y10T 292/0937	. . . . .	Gravity actuated
Y10T 292/0938	. . . . .	Operating means
Y10T 292/0939	. . . . .	Cam
Y10T 292/094	. . . . .	Flexible
Y10T 292/0941	. . . . .	Lever
Y10T 292/0943	. . . . .	Push or pull rod
Y10T 292/0944	. . . . .	Rigid
Y10T 292/0945	. . . . .	Operating means
Y10T 292/0946	. . . . .	Link and lever
Y10T 292/0947	. . . . .	Cam
Y10T 292/0948	. . . . .	Closure
Y10T 292/0949	. . . . .	Lever
Y10T 292/0951	. . . . .	Rigid
Y10T 292/0952	. . . . .	Closure catch
Y10T 292/0953	. . . . .	Friction catch
Y10T 292/0954	. . . . .	Padlock or seal catch
Y10T 292/0955	. . . . .	Screw catch
Y10T 292/0956	. . . . .	Sliding catch
Y10T 292/0957	. . . . .	Spring-arm catch
Y10T 292/0959	. . . . .	Swinging catch
Y10T 292/096	. . . . .	Sliding
Y10T 292/0961	. . . . .	Multiple head
Y10T 292/0962	. . . . .	Operating means
Y10T 292/0963	. . . . .	Link and lever
Y10T 292/0964	. . . . .	Cam
Y10T 292/0966	. . . . .	Gear
Y10T 292/0967	. . . . .	Lever
Y10T 292/0968	. . . . .	Rigid
Y10T 292/0969	. . . . .	Spring projected
Y10T 292/097	. . . . .	Operating means
Y10T 292/0971	. . . . .	Cam and lever
Y10T 292/0972	. . . . .	Lever and push or pull rod
Y10T 292/0974	. . . . .	Link and lever
Y10T 292/0975	. . . . .	Link and push or pull rod
Y10T 292/0976	. . . . .	Sliding cam

Y10T 292/0977	. . . . .	Cam
Y10T 292/0978	. . . . .	Specifically related to vehicle closure
Y10T 292/0979	. . . . .	Bolt disabled by contraretractive movement of inside handle
Y10T 292/098	. . . . .	Auxiliary bolt
Y10T 292/0982	. . . . .	Bolt blocking or disabling means
Y10T 292/0983	. . . . .	Involves rollback
Y10T 292/0984	. . . . .	Rollback members located on separate spindles
Y10T 292/0985	. . . . .	Discrete pivotable or rotatable actuator
Y10T 292/0986	. . . . .	Discrete push or pull actuator
Y10T 292/0987	. . . . .	Bolt has ancillary projection spring
Y10T 292/0989	. . . . .	Plural rollback elements directionally selectively effective
Y10T 292/099	. . . . .	On separate spindles
Y10T 292/0991	. . . . .	On a tubular member
Y10T 292/0992	. . . . .	Flexible
Y10T 292/0993	. . . . .	Gear
Y10T 292/0994	. . . . .	Lever
Y10T 292/0995	. . . . .	Push or pull rod
Y10T 292/0997	. . . . .	Rigid
Y10T 292/0998	. . . . .	Screw
Y10T 292/0999	. . .	Spring retracted
Y10T 292/10	. . . . .	Friction catch
Y10T 292/1001	. . . . .	Sliding catch
Y10T 292/1002	. . . . .	Spring-arm catch
Y10T 292/1003	. . . . .	Swinging catch
Y10T 292/1005	. . . . .	Cam-operating means
Y10T 292/1006	. . .	Gravity actuated
Y10T 292/1007	. . . . .	Operating means
Y10T 292/1008	. . . . .	Cam and lever
Y10T 292/1009	. . . . .	Link and lever
Y10T 292/101	. . . . .	Cam
Y10T 292/1011	. . . . .	Lever
Y10T 292/1013	. . . . .	Rigid
Y10T 292/1014	. . .	Operating means
Y10T 292/1015	. . . . .	Link and lever
Y10T 292/1016	. . . . .	Cam
Y10T 292/1017	. . . . .	Flexible
Y10T 292/1018	. . . . .	Gear
Y10T 292/102	. . . . .	Lever
Y10T 292/1021	. . . . .	Motor
Y10T 292/1022	. . . . .	Rigid

Y10T 292/1023	. . . . .	Closure catch
Y10T 292/1024	. . . . .	Friction catch
Y10T 292/1025	. . . . .	Padlock or seal catch
Y10T 292/1026	. . . . .	Screw catch
Y10T 292/1028	. . . . .	Sliding catch
Y10T 292/1029	. . . . .	Seal
Y10T 292/103	. . . . .	Spring-arm catch
Y10T 292/1031	. . . . .	Swinging catch
Y10T 292/1032	. . . . .	Seal
Y10T 292/1033	. . . . .	Screw
Y10T 292/1034	. . . . .	Curved
Y10T 292/1036	. . . . .	End lever
Y10T 292/1037	. . . . .	Pivoted end
Y10T 292/1038	. . . . .	Roller
Y10T 292/1039	. . . . .	Swinging and camming
Y10T 292/10395	. . . . .	Spring projected
Y10T 292/104	. . . . .	Rigid operating means
Y10T 292/1041	. . . . .	Rigid operating means
Y10T 292/1043	. . . . .	Swinging
Y10T 292/1044	. . . . .	Multiple head
Y10T 292/1045	. . . . .	Operating means
Y10T 292/1046	. . . . .	Cam
Y10T 292/1047	. . . . .	Closure
Y10T 292/1048	. . . . .	Lever
Y10T 292/1049	. . . . .	Rigid
Y10T 292/1051	. . . . .	Spring projected
Y10T 292/1052	. . . . .	Operating means
Y10T 292/1053	. . . . .	Lever and push or pull rod
Y10T 292/1054	. . . . .	Link and cam
Y10T 292/1055	. . . . .	Link and lever
Y10T 292/1056	. . . . .	Cam
Y10T 292/1057	. . . . .	Flexible
Y10T 292/1059	. . . . .	Lever
Y10T 292/106	. . . . .	Push or pull rod
Y10T 292/1061	. . . . .	Rigid
Y10T 292/1062	. . . . .	Spring retracted
Y10T 292/1063	. . . . .	Gravity actuated
Y10T 292/1064	. . . . .	Operating means
Y10T 292/1066	. . . . .	Cam and lever
Y10T 292/1067	. . . . .	Link and lever

Y10T 292/1068	. . . . .	Cam
Y10T 292/1069	. . . . .	Flexible
Y10T 292/107	. . . . .	Lever
Y10T 292/1071	. . . . .	Push or pull rod
Y10T 292/1072	. . . . .	Rigid
Y10T 292/1074	. . . . .	Roller
Y10T 292/1075	. . . . .	Operating means
Y10T 292/1076	. . . . .	Link and lever
Y10T 292/1077	. . . . .	Cam
Y10T 292/1078	. . . . .	Closure
Y10T 292/1079	. . . . .	Gear
Y10T 292/108	. . . . .	Lever
Y10T 292/1082	. . . . .	Motor
Y10T 292/1083	. . . . .	Rigid
Y10T 292/1084	. . . . .	Closure catch
Y10T 292/1085	. . . . .	Friction catch
Y10T 292/1086	. . . . .	Padlock or seal catch
Y10T 292/1087	. . . . .	Screw catch
Y10T 292/1089	. . . . .	Sliding catch
Y10T 292/109	. . . . .	Seal
Y10T 292/1091	. . . . .	Spring-arm catch
Y10T 292/1092	. . . . .	Swinging catch
Y10T 292/1093	. . . . .	Seal
Y10T 292/1094	. . . . .	Screw
Y10T 292/1095	. . . . .	Seal-rupturing devices
Y10T 292/1097	. . . . .	Reversible
Y10T 292/1098	. . . . .	Cam and lever operating means
Y10T 292/1099	. . . . .	Screw
Y10T 292/11	. . . . .	Magnetic
Y10T 292/14	. . . . .	Ball
Y10T 292/17	. . . . .	Bendable securers
Y10T 292/175	. . . . .	Bolt releasers
Y10T 292/18	. . . . .	Free-end-engaging means
Y10T 292/19	. . . . .	Foot operated
Y10T 292/20	. . . . .	Clamps
Y10T 292/202	. . . . .	Hatch fastener
Y10T 292/205	. . . . .	Ring
Y10T 292/207	. . . . .	Permanently deformed
Y10T 292/209	. . . . .	Resilient wedge
Y10T 292/212	. . . . .	With expanding or contracting means

Y10T 292/214	. . . . Screw
Y10T 292/216	. . . . Toggle lever
Y10T 292/218	. . Screw against closure
Y10T 292/221	. . Screw and nut
Y10T 292/223	. . . Swingable
Y10T 292/225	. . Cam-operating means
Y10T 292/228	. . Portable
Y10T 292/23	. Cross bars
Y10T 292/237	. . Screw-operating means
Y10T 292/243	. . Vehicle door latches
Y10T 292/25	. Cylinder
Y10T 292/28	. Extension link
Y10T 292/282	. . Multiple
Y10T 292/283	. . Chain
Y10T 292/285	. . Notched bar
Y10T 292/286	. . . Sliding catch
Y10T 292/288	. . . Swinging catch
Y10T 292/289	. . Slotted bar
Y10T 292/291	. . . Sliding catch
Y10T 292/293	. . . Swinging catch
Y10T 292/2935	. . Slotted or notched keeper
Y10T 292/294	. . . Sliding catch
Y10T 292/296	. . . Swinging catch
Y10T 292/297	. . Notched keeper
Y10T 292/299	. . Slotted keeper
Y10T 292/301	. . Friction catch
Y10T 292/302	. . Screw catch
Y10T 292/304	. . Sliding catch
Y10T 292/305	. . Swinging catch
Y10T 292/306	. Gear
Y10T 292/307	. . Sliding catch
Y10T 292/308	. . Swinging catch
Y10T 292/31	. Hasps
Y10T 292/314	. . Sliding catch
Y10T 292/319	. . . Seal
Y10T 292/323	. . Swinging catch
Y10T 292/327	. . . Seal
Y10T 292/331	. . Seal catch
Y10T 292/336	. . Seal-rupturing devices
Y10T 292/34	. Portable

Y10T 292/37	. Portable securer plate or bar
Y10T 292/373	. . Sliding and swinging holding member
Y10T 292/376	. . Screw-holding member
Y10T 292/379	. . Sliding holding member
Y10T 292/382	. . . Screw-operating means
Y10T 292/385	. . . Screw catch
Y10T 292/388	. . . Sliding catch
Y10T 292/391	. . . Swinging catch
Y10T 292/394	. . Swinging holding member
Y10T 292/397	. . . Catch devices
Y10T 292/40	. Rings
Y10T 292/42	. Rigid engaging means
Y10T 292/426	. . Screw catch
Y10T 292/432	. . Sliding catch
Y10T 292/438	. . Spring-arm catch
Y10T 292/444	. . Swinging catch
Y10T 292/45	. Rod clamps
Y10T 292/47	. . Friction-plate catch
Y10T 292/48	. Seals
Y10T 292/481	. . Compressible disk
Y10T 292/483	. . . Reinforced
Y10T 292/484	. . . Multiple
Y10T 292/485	. . . . Sheet metal
Y10T 292/487	. . . . Hard and soft metal
Y10T 292/488	. . . Sheet metal
Y10T 292/49	. . Compressible rivets and eyelets
Y10T 292/491	. . Distorted shackle
Y10T 292/492	. . Driving
Y10T 292/494	. . Interengaging shackle ends, inclosing housing
Y10T 292/4945	. . Rigid shackle ends
Y10T 292/495	. . . Resilient and rigid engaging means
Y10T 292/496	. . . Resilient engaging means
Y10T 292/497	. . Resilient shackle ends
Y10T 292/498	. . . Rigid engaging means
Y10T 292/499	. . . Resilient engaging means
Y10T 292/50	. . Single piece, spring catch
Y10T 292/502	. . Shiftable catch shackle operated
Y10T 292/503	. . Split-ring catch, shackle operated
Y10T 292/505	. . Strap-end fasteners
Y10T 292/506	. . Rigid disk, distorted shackle

Y10T 292/507	. . Tag type
Y10T 292/509	. . Encasing
Y10T 292/51	. Seal bolts
Y10T 292/513	. Shackles
Y10T 292/516	. . Sliding catch, seal
Y10T 292/522	. . Swinging catch, seal
Y10T 292/528	. . Seal catch
Y10T 292/534	. . Seal-rupturing devices
Y10T 292/54	. Trippers
Y10T 292/546	. . Sliding detent
Y10T 292/552	. . Spring-arm detent
Y10T 292/558	. . Sliding bolt, swinging detent
Y10T 292/564	. . Swinging bolt, swinging detent
Y10T 292/57	. Operators with knobs or handles
Y10T 292/59	. Rollback and spindle connection
Y10T 292/62	. Bolt casings
Y10T 292/65	. Braces
Y10T 292/67	. . Portable
Y10T 292/68	. Keepers
Y10T 292/683	. . Segment
Y10T 292/685	. . With anti-friction means
Y10T 292/688	. . With silencing or anti-rattle means
Y10T 292/691	. . . Take-up
Y10T 292/694	. . Covers
Y10T 292/696	. . With movable dog, catch or striker
Y10T 292/699	. . . Motor controlled
Y10T 292/702	. . . Pivoted or swinging
Y10T 292/705	. . Adjustable
Y10T 292/707	. . . Vertically
Y10T 292/71	. Wedges
Y10T 292/73	. . Portable
Y10T 292/74	. Weights
Y10T 292/76	. Blind-slat holders
Y10T 292/79	. Bolt guards
Y10T 292/82	. Knobs
Y10T 292/85	. Knob-attaching devices
Y10T 292/854	. . Friction
Y10T 292/858	. . Screw
Y10T 292/861	. . . Guards
Y10T 292/865	. . Sliding

- Y10T 292/869 . . Spring arm
- Y10T 292/873 . . Swinging
- Y10T 292/876 . . Wedge
- Y10T 292/88 . Knob bearings
- Y10T 292/91 . Knob rose plates
- Y10T 292/93 . Latch spindles
- Y10T 292/96 . Latch-spindle catches

Former US Class 307 series

- | | |
|--------------------|---|
| Y10T 307/00 | Electrical transmission or interconnection systems |
| Y10T 307/25 | . Plural load circuit systems |
| Y10T 307/258 | . . Common conductor or return type |
| Y10T 307/266 | . . . Polyphase |
| Y10T 307/273 | Phase balancing |
| Y10T 307/281 | . . . Voltage divider type |
| Y10T 307/289 | . . . Plural output generators |
| Y10T 307/297 | . . Transformer connections |
| Y10T 307/305 | . . Plural sources of supply |
| Y10T 307/313 | . . . Interconnected for energy transfer |
| Y10T 307/32 | With control of magnitude of energy transfer |
| Y10T 307/328 | Diverse sources |
| Y10T 307/336 | AC and DC |
| Y10T 307/344 | . . . Substitute or alternate source |
| Y10T 307/352 | . . . With control of magnitude of current or power |
| Y10T 307/359 | . . . Diverse sources |
| Y10T 307/367 | AC and DC |
| Y10T 307/375 | Different frequencies |
| Y10T 307/383 | Different voltages |
| Y10T 307/391 | . . . Selectively connected loads and/or sources |
| Y10T 307/398 | . . Anticoupling of load circuits through same source |
| Y10T 307/406 | . . Control of current or power |
| Y10T 307/414 | . . . Load current proportioning or dividing |
| Y10T 307/422 | . . . Constant magnitude control |
| Y10T 307/43 | By control of one or more load circuits |
| Y10T 307/438 | . . . Limit control |
| Y10T 307/445 | . . Serially connected load circuits |
| Y10T 307/453 | . . . Selective series-parallel connections |
| Y10T 307/461 | . . Selectively connected or controlled load circuits |
| Y10T 307/469 | . . . Condition responsive |

Y10T 307/477	. . . Code-controlled
Y10T 307/484	. . . Sequential or alternating
Y10T 307/492	. . Circuit arrangements or layouts
Y10T 307/50	. Plural supply circuits or sources
Y10T 307/505	. . One source floats across or compensates for other source
Y10T 307/511	. . . With intervening converter
Y10T 307/516	. . . . Storage battery or accumulator-type source
Y10T 307/522	. . . Dynamoelectric-type source
Y10T 307/527	. . . Storage battery or accumulator-type source
Y10T 307/533	. . . . With series-connected auxiliary source
Y10T 307/538	. . . . Tap-changing or variable number of cells
Y10T 307/544	. . Circulating- or inter-current control or prevention
Y10T 307/549	. . Load current control
Y10T 307/555	. . . Load current division
Y10T 307/56	. . . . Serially connected sources
Y10T 307/565	. . . . Fixed or predetermined ratio
Y10T 307/571	. . . . . Diverse-or unlike-type sources
Y10T 307/576	. . . . . Plural generators
Y10T 307/582	. . . . . Plural converters
Y10T 307/587	. . . . Peak or excess load
Y10T 307/593	. . . Constant load or current
Y10T 307/598	. . . . Serially connected sources
Y10T 307/604	. . . Load-limiting
Y10T 307/609	. . . Serially connected sources
Y10T 307/615	. . Substitute or emergency source
Y10T 307/62	. . . Plural substitute sources
Y10T 307/625	. . . Storage battery or accumulator
Y10T 307/631	. . . . With intervening dynamoelectric machine
Y10T 307/636	. . . Dynamoelectric
Y10T 307/642	. . Sources distributed along load circuit
Y10T 307/647	. . Load transfer without paralleling sources
Y10T 307/653	. . Series-parallel connection of sources
Y10T 307/658	. . Diverse or unlike electrical characteristics
Y10T 307/664	. . . Differing frequencies
Y10T 307/669	. . . Differing capacities
Y10T 307/675	. . . Differing voltages
Y10T 307/68	. . . . Generator sources
Y10T 307/685	. . Series-connected sources
Y10T 307/691	. . . Generator sources
Y10T 307/696	. . Selective or optional sources

Y10T 307/702	. . . Predetermined sequence
Y10T 307/707	. . Plural converters
Y10T 307/713	. . Plural transformers
Y10T 307/718	. . Plural generators
Y10T 307/724	. . Connecting or disconnecting
Y10T 307/729	. . . Condition responsive
Y10T 307/735	. . . . Attainment of voltage, frequency or phase relationship
Y10T 307/74	. Switching systems
Y10T 307/747	. . Plural switches
Y10T 307/753	. . . Lazy-man switch type
Y10T 307/76	. . . Selectively actuated
Y10T 307/766	. . Condition responsive
Y10T 307/773	. . . Light, heat, vibratory or radiant energy
Y10T 307/779	. . . Fluid pressure, density, level, velocity or humidity
Y10T 307/786	. . . Mechanical force
Y10T 307/793	. . . . Speed, centrifugal or kinetic force
Y10T 307/799	. . . . . Inertia or acceleration
Y10T 307/806	. . . . . Direction of rotation
Y10T 307/812	. . . . . Differential speed between two bodies
Y10T 307/819	. . . . . Torque
Y10T 307/826	. . . Electrical
Y10T 307/832	. . . . Power or energy
Y10T 307/839	. . . . Polarity, phase sequence or reverse flow
Y10T 307/845	. . . . AC or DC discriminating
Y10T 307/852	. . . . Frequency
Y10T 307/858	. . . . Voltage
Y10T 307/865	. . . . Current
Y10T 307/872	. . Repetitive make and break
Y10T 307/878	. . . Electronically controlled relay
Y10T 307/885	. . . . Responsive to physical condition
Y10T 307/891	. . . Thermal relay
Y10T 307/898	. . . Vibrating relay
Y10T 307/904	. . . Miscellaneous
Y10T 307/911	. . With operation facilitating feature
Y10T 307/918	. . . Preliminary reduction in current or voltage of system
Y10T 307/924	. . . Switch contact conditioning
Y10T 307/931	. . . . Polarity reversing
Y10T 307/937	. . Switch actuation
Y10T 307/944	. . . Power circuit controlled
Y10T 307/951	. . . With time delay or retardation means

- Y10T 307/957 Electrically initiated
- Y10T 307/964 Series connected switches
- Y10T 307/97 . . . With locking, holding or braking means
- Y10T 307/977 . . . Electrical actuator
- Y10T 307/983 . . . Fluid-pressure actuator

Former US Class 403 Series

Y10T 403/00

Joints and connections

- Y10T 403/10 . Selectively engageable hub to shaft connection
- Y10T 403/11 . including frangible component
- Y10T 403/12 . Selectively assembled, e.g. , convertible, etc.
- Y10T 403/125 . . Selective orientation
- Y10T 403/13 . Inflatable connector
- Y10T 403/14 . with opening for access to connector or operator
- Y10T 403/142 . . to threaded component
- Y10T 403/145 . . . Transverse to thread axis
- Y10T 403/148 . . to biased component
- Y10T 403/15 . Closure or plug spaced from joint
- Y10T 403/16 . with adjunctive protector, broken parts retainer, repair, assembly or disassembly feature
- Y10T 403/1608 . . Holding means or protector functioning only during transportation, assembly or disassembly
- Y10T 403/1616 . . Position or guide means
- Y10T 403/1624 . . . Related to joint component
- Y10T 403/1633 . . Utilizing fluid pressure
- Y10T 403/1641 . . Back-off means, e.g., separator, etc.
- Y10T 403/1649 . . Handle or handwheel
- Y10T 403/1658 . . . Actuates retainer or blocker
- Y10T 403/1666 . . tool-engaging or accommodating means or with tool
- Y10T 403/1674 . . . for latch or retainer
- Y10T 403/1683 . . Releasably captive nut or bolt
- Y10T 403/1691 . . Means to lock bolt or nut when other is turned
- Y10T 403/17 . with adjunctive shield
- Y10T 403/18 . Structurally installed in diverse art device
- Y10T 403/185 . . Head or base
- Y10T 403/19 . Coupling supported by independent bearing
- Y10T 403/20 . with indicator or inspection means
- Y10T 403/21 . Utilizing thermal characteristic, e.g. , expansion or contraction, etc.
- Y10T 403/213 . . Interposed material of intermediate coefficient of expansion
- Y10T 403/217 . . Members having different coefficients of expansion

- Y10T 403/22 . with fluid pressure responsive component
- Y10T 403/23 . with ambient condition responsive control means
- Y10T 403/24 . with independent handle or operator
- Y10T 403/25 . with distinct fluid or article handling or directing feature
- Y10T 403/251 . . External reservoir
- Y10T 403/253 . . Pressure fitting
- Y10T 403/255 . . including port or reservoir communicating with joint
- Y10T 403/257 . . . Articulated member
- Y10T 403/259 At joint interface
- Y10T 403/26 . Non-adhering fluent material at joint
- Y10T 403/27 . with strain-limiting means
- Y10T 403/28 . Combined
- Y10T 403/29 . Rotarily connected, differentially translatable members, e.g. , turn-buckle, etc.
- Y10T 403/291 . . having tool-engaging means or operating handle
- Y10T 403/293 . . having operating mechanism
- Y10T 403/295 . . having locking means
- Y10T 403/297 . . Differential pitch, similar hand
- Y10T 403/299 . . Externally threaded actuator
- Y10T 403/30 . Laterally related members connected by latch means, e.g. , scaffold connectors
- Y10T 403/31 . Flexible diaphragm or bellows
- Y10T 403/315 . . with additional connection or packing
- Y10T 403/32 . Articulated members
- Y10T 403/32008 . . Plural distinct articulation axes
- Y10T 403/32016 . . . Three or more parallel axes
- Y10T 403/32024 . . . Single adjustment for plural axes
- Y10T 403/32032 . . . Plural ball and socket
- Y10T 403/32041 . . . Universal
- Y10T 403/32049 Non-coplanar axes
- Y10T 403/32057 . . . Angular and linear
- Y10T 403/32065 Screw and swivel
- Y10T 403/32073 Pivot stud slidable in elongated opening
- Y10T 403/32081 . . . Parallel rotary
- Y10T 403/32091 . . . Plural translating connections
- Y10T 403/32098 . . Branched
- Y10T 403/32106 . . Member pivoted at rigid corner
- Y10T 403/32114 . . including static joint
- Y10T 403/32122 . . . Trunnion assembly to side of rod
- Y10T 403/32131 . . . One member is plate or side
- Y10T 403/32139 Secant, i.e., rod extending through plate
- Y10T 403/32147 Plate or side forms bearing surface

Y10T 403/32155	. . . .	Bearing component clamped to plate or side, e.g., bolted, etc.
Y10T 403/32163	. . .	Articulate joint intermediate end joints
Y10T 403/32172	. . . .	Variable angle
Y10T 403/32181	. . . . .	Universal
Y10T 403/32188	. . .	Angled or offset members
Y10T 403/32196	. . .	Articulate joint is ball and socket
Y10T 403/32204	. . . .	with threaded joint
Y10T 403/32213	. . .	Articulate joint is a swivel
Y10T 403/32221	. . .	Articulate joint comprises pivoted clevis or channel bar
Y10T 403/32229	. . .	Articulate joint is a slide
Y10T 403/32237	. .	including operator
Y10T 403/32245	. .	Arcuate shank moves in complementary guide
Y10T 403/32254	. .	Lockable at fixed position
Y10T 403/32262	. . .	At selected angle
Y10T 403/32271	. . . .	Movable brace between members
Y10T 403/32278	. . . .	Members rotatable about oblique axes
Y10T 403/32286	. . . .	Clamping screw traverses sliding complementary arcuate bearing surfaces
Y10T 403/32295	. . . .	Securing yoke or ring spaced radially from locking means
Y10T 403/32303	. . . . .	Eyebolt
Y10T 403/32311	. . . .	Ball and socket
Y10T 403/32319	. . . .	including pivot stud
Y10T 403/32327	. . . . .	including radially spaced detent or latch component
Y10T 403/32336	. . . . .	Engaging notch or recess in outer periphery of component
Y10T 403/32344	. . . . .	Side of rod engages recess in radial face
Y10T 403/32352	. . . . .	Pivoted detent
Y10T 403/32361	. . . . .	Engaging recess in radial face
Y10T 403/32368	. . . . .	including radial interengaging tongue and slot or serrations
Y10T 403/32377	. . . . .	Radially spaced arcuate slot engages fastener
Y10T 403/32385	. . . . .	Locked by plural motions of one member
Y10T 403/32393	. . . . .	including bridging keeper
Y10T 403/32401	. . . . .	Locked by nesting parts
Y10T 403/32409	. . . . .	Members locked in axial alignment
Y10T 403/32418	. . . .	Plural distinct positions
Y10T 403/32426	. . .	Plural distinct positions
Y10T 403/32434	. . . .	Unidirectional movement, e.g., ratchet, etc.
Y10T 403/32442	. . . .	At least one discrete position
Y10T 403/32451	. . . . .	Step-by-step adjustment
Y10T 403/32459	. . . . .	Retainer extends through aligned recesses
Y10T 403/32467	. . .	Telescoping members

Y10T 403/32475	. . . .	having detent
Y10T 403/32483	. . . . .	Spring biased
Y10T 403/32491	. . . . .	Threaded
Y10T 403/32501	. . . . .	Cam or wedge
Y10T 403/32508	. . . . .	having transverse pin
Y10T 403/32516	. . . . .	Remotely actuated
Y10T 403/32524	. . . . .	Self-locking
Y10T 403/32532	. . . .	Clamped members
Y10T 403/32541	. . . .	Rotatable members resiliently biased to one position
Y10T 403/32549	. . . .	including limit means
Y10T 403/32557	. . . .	for pivotal motion
Y10T 403/32565	. . . . .	Ball and socket with restricted movement about one axis
Y10T 403/32573	. . . . .	Ball stud passes through confining opening
Y10T 403/32581	. . . . .	Pin and slot
Y10T 403/32591	. . . . .	Opposed stops on one member
Y10T 403/32598	. . . .	Threaded interface
Y10T 403/32606	. . . .	Pivoted
Y10T 403/32614	. . . . .	including circumferential biasing or damping means
Y10T 403/32622	. . . . .	Rocking or rolling contact
Y10T 403/32631	. . . . .	Universal ball and socket
Y10T 403/32639	. . . . .	including internal tie means
Y10T 403/32647	. . . . .	Plural concave surfaces with diverse curvature
Y10T 403/32655	. . . . .	Interposed concavo-convex component
Y10T 403/32663	. . . . .	Outer surfaces
Y10T 403/32672	. . . . .	Swiveled ball parts or seat
Y10T 403/32681	. . . . .	Composite ball
Y10T 403/32688	. . . . .	Spring biased segments
Y10T 403/32696	. . . . .	Nonmetallic part
Y10T 403/32704	. . . . .	Stud extends into ball
Y10T 403/32713	. . . . .	Elastomerically biased or backed components
Y10T 403/32721	. . . . .	Elastomeric seat
Y10T 403/32729	. . . . .	Externally packed
Y10T 403/32737	. . . . .	including liner, shim, or discrete seat
Y10T 403/32745	. . . . .	Spring acts through wedging surfaces
Y10T 403/32754	. . . . .	Variably preloaded
Y10T 403/32762	. . . . .	Spring-biased seat opposite ball stud
Y10T 403/32771	. . . . .	Porous
Y10T 403/32778	. . . . .	Completely spacing the members
Y10T 403/32786	. . . . .	Divided socket-type coupling
Y10T 403/32795	. . . . .	Bifurcated socket

Y10T 403/32803	. . . .	Separable socket sections
Y10T 403/32811	. . . .	Spring-biased
Y10T 403/32819	. . . .	including tension or take-up means
Y10T 403/32827	. . . .	Interposed spring means coaxial with pivot
Y10T 403/32836	. . . .	Acting through tapered surface on bearing component
Y10T 403/32844	. . . .	Manually variable
Y10T 403/32852	. . . .	External of bearing assembly, e.g., antirattler, etc.
Y10T 403/32861	. . . .	T-pivot, e.g., wrist pin, etc.
Y10T 403/32868	. . . .	Floating pin
Y10T 403/32877	. . . .	Pin is integral with or secured to inner member
Y10T 403/32885	. . . .	Expanded pin or end
Y10T 403/32893	. . . .	including distinct pin retainer
Y10T 403/32901	. . . . .	Unitary clip or plug
Y10T 403/32909	. . . . .	Threaded pin end
Y10T 403/32918	. . . . .	fork and tongue
Y10T 403/32926	. . . . .	with interposed antifriction means
Y10T 403/32934	. . . . .	Oppositely laterally movable tines
Y10T 403/32942	. . . .	On oblique interface
Y10T 403/32951	. . . .	Transverse pin or stud
Y10T 403/32959	. . . . .	Traverses interposed facing component
Y10T 403/32967	. . . . .	Attached to or integral with one member
Y10T 403/32975	. . . .	Rotatable
Y10T 403/32983	. . . .	Rod in socket
Y10T 403/32991	. . . .	Axially spring-biased coaxial members
Y10T 403/33	. . . .	Transverse rod to spaced plate surfaces
Y10T 403/335	. . . .	Retainer utilizes or abuts plural plates
Y10T 403/34	. . . .	Branched
Y10T 403/341	. . . .	Three or more radiating members
Y10T 403/342	. . . .	Polyhedral
Y10T 403/343	. . . . .	Unilateral of plane
Y10T 403/344	. . . . .	Plural pairs of axially aligned members
Y10T 403/345	. . . .	Coplanar
Y10T 403/346	. . . . .	Additional rod held by encompassing means
Y10T 403/347	. . . .	Polyhedral
Y10T 403/348	. . . .	Parallel rods
Y10T 403/349	. . . .	Coplanar
Y10T 403/35	. . . .	Diverse material coupling member
Y10T 403/36	. . . .	Three or more serial joints, at least one diverse
Y10T 403/362	. . . .	Nonaligned axes
Y10T 403/364	. . . .	Separable intermediate joint

- Y10T 403/366 . . . Axially acting connector
- Y10T 403/368 . . . Screw or cam
- Y10T 403/37 . Joint involving plural layers of single rod
- Y10T 403/38 . Laterally related rods independently joined to transverse surface
- Y10T 403/39 . Rod to member to side, e.g. , plate, rod side, etc.
- Y10T 403/3906 . . Rod side to member to side
- Y10T 403/3913 . . Unilateral of side
- Y10T 403/3921 . . Arcuate or multiplanar side
- Y10T 403/3926 . . . Encompassed side
- Y10T 403/3933 . . Intermediate member includes tubular part
- Y10T 403/3941 . . . Side or tubular part deformed in situ
- Y10T 403/3946 . . . Intermediate member extends through side
- Y10T 403/3953 Split or divided tubular part and coacting compressor
- Y10T 403/3961 Transverse clamp secures rod and tubular part
- Y10T 403/3966 Rod also extends through side
- Y10T 403/3973 . . . Oblique rod
- Y10T 403/3981 . . . Intermediate member secured to side by radial flange
- Y10T 403/3986 . . . Internally threaded tubular part
- Y10T 403/3993 . . Intermediate member extends completely through side
- Y10T 403/40 . Radially spaced members joined by independent coupling
- Y10T 403/405 . . Flexible intermediate member
- Y10T 403/41 . Coacting connection between inner member and plural parts of outer member
- Y10T 403/42 . Rigid angle coupling, e.g. , elbow or u, etc.
- Y10T 403/43 . Axially curved or bent portion of rod is joint component
- Y10T 403/4309 . . Interfitted crossing rods
- Y10T 403/4318 . . Joined to laterally related transverse surface at axially spaced points
- Y10T 403/4327 . . Reversely bent portion
- Y10T 403/4336 . . . Around eye-forming thimble
- Y10T 403/4345 . . . with wedge clamp
- Y10T 403/4354 . . . Held by crimped collar
- Y10T 403/4363 . . . Open U
- Y10T 403/4372 . . Intertwisted ends
- Y10T 403/4381 . . End of rod is deflected laterally within connector
- Y10T 403/4391 . . Plural rods distorted by single component
- Y10T 403/44 . Three or more members connected at single locus
- Y10T 403/443 . . All encompassed
- Y10T 403/447 . . Mutually contacting
- Y10T 403/45 . Flexibly connected rigid members
- Y10T 403/451 . . Rigid sleeve encompasses flexible bushing
- Y10T 403/452 . . . Longitudinally divided sleeve

Y10T 403/453	. . Flexible sleeve-type coupling
Y10T 403/454	. . Connecting pin traverses radially interposed elastomer
Y10T 403/455	. . Elastomer interposed between radially spaced members
Y10T 403/456	. . . Elastomer encompasses shoulder on inner member
Y10T 403/457	. . . including axially acting compressing means
Y10T 403/458	. . . Composite bushing with elastomeric component
Y10T 403/459	. . Helical spring type coupling
Y10T 403/46	. Rod end to transverse side of member
Y10T 403/4602	. . Corner joint
Y10T 403/4605	. . Stirrup
Y10T 403/4608	. . Structure attached to rod end encompasses side
Y10T 403/4611	. . . Clamped saddle
Y10T 403/4614	. . . Yoke or ring
Y10T 403/4617	. . . . having radial screw at bight
Y10T 403/4621	. . including saddle
Y10T 403/4622	. . Gland type
Y10T 403/4625	. . . Rod and side gripped simultaneously by single actuation
Y10T 403/4628	. . Rod clamped to hole edge
Y10T 403/4631	. . Rod to open edge of side, e.g., wrap-around connection
Y10T 403/4634	. . Rod and side deformingly interlocked
Y10T 403/4637	. . Radially interposed, side-engaging shim or bushing
Y10T 403/4641	. . Socket formed by shaping or deforming side
Y10T 403/4642	. . Integral transverse projection on side, e.g., necked, etc.
Y10T 403/4645	. . . From rod side
Y10T 403/4648	. . Utilizing opposite sides of member
Y10T 403/4651	. . . Rod is expanded by component inserted from distal side
Y10T 403/4654	. . . . Separate and deformable component
Y10T 403/4657	. . . . Plural contacting components
Y10T 403/4661	. . . . Barbed component
Y10T 403/4662	. . . Inserted, blind-side-engaging, retaining portion on rod
Y10T 403/4665	. . . Stepped or tapered recess in side
Y10T 403/4668	. . . . Terminal, rod-attached retainer engages distal side
Y10T 403/4671	. . . . . Inserted into rod
Y10T 403/4674	. . . Clamped member
Y10T 403/4677	. . . . Clamping component engages recessed side
Y10T 403/4681	. . . . Bolted to rod
Y10T 403/4682	. . . . Between rod shoulder and terminal nut
Y10T 403/4685	. . . . Bolted through member
Y10T 403/4688	. . . . Coaxial collar or shoulder or rod is clamp element
Y10T 403/4691	. . Flange on rod bolted to side

- Y10T 403/4694 . . Rod received in recessed side, e.g., socket or tapered opening, etc.
- Y10T 403/4697 . . Utilizing internal rod structure
- Y10T 403/47 . Molded joint
- Y10T 403/471 . . And independent connection
- Y10T 403/472 . . including mechanical interlock
- Y10T 403/473 . . Socket or open cup for bonding material
- Y10T 403/475 . . Member cast in situ
- Y10T 403/477 . . Fusion bond, e.g., weld, etc.
- Y10T 403/478 . . . Metallic fusion material
- Y10T 403/479 Added bonding material, e.g., solder, braze, etc.
- Y10T 403/48 . Shrunken fit
- Y10T 403/49 . Member deformed in situ
- Y10T 403/4908 . . Separating element between strands of member
- Y10T 403/4916 . . Interposed deforming element contacts socket bottom
- Y10T 403/4924 . . Inner member is expanded by longitudinally inserted element
- Y10T 403/4933 . . by separate, deformable element
- Y10T 403/4941 . . Deformation occurs simultaneously with action of separate, diverse function, joint component
- Y10T 403/4949 . . Deforming component is inserted section
- Y10T 403/4958 . . Separate deforming means remains with joint assembly
- Y10T 403/4966 . . Deformation occurs simultaneously with assembly
- Y10T 403/4974 . . by piercing
- Y10T 403/4983 . . Diverse resistance to lateral deforming force
- Y10T 403/4991 . . Both members deformed
- Y10T 403/50 . Bridged by diverse connector
- Y10T 403/51 . including spaced, diverse connections
- Y10T 403/52 . including distinct packing
- Y10T 403/53 . Split end with laterally movable opposed portions
- Y10T 403/535 . . with separate force-applying means
- Y10T 403/54 . Flexible member is joint component
- Y10T 403/55 . Member ends joined by inserted section
- Y10T 403/551 . . Externally bridged
- Y10T 403/553 . . Laterally inserted section
- Y10T 403/555 . . Angle section
- Y10T 403/556 . . Section threaded to member
- Y10T 403/557 . . Expansible section
- Y10T 403/559 . . Fluted or splined section
- Y10T 403/56 . Thread adaptor
- Y10T 403/57 . Distinct end coupler
- Y10T 403/5706 . . Diverse serial connections

Y10T 403/5713	. . . Axially cleft coupler
Y10T 403/5721	. . Single actuator for plural connections
Y10T 403/5726	. . . Axially biased end portions
Y10T 403/5733	. . Plural opposed sockets
Y10T 403/5741	. . Separate screw or pin-type connections
Y10T 403/5746	. . Continuous thread
Y10T 403/5753	. . having separable end caps or plugs
Y10T 403/5761	. . Interrupted periphery, e.g., split or segmental, etc.
Y10T 403/5766	. . . Axially divided segments
Y10T 403/5773	. . . . Interfitting
Y10T 403/5781	. . . . Bolted
Y10T 403/5786	. . . Split
Y10T 403/5793	. . including member wedging or camming means
Y10T 403/58	. including ancillary means blocking disconnection of joint
Y10T 403/581	. . Blocker for assembled joint retainer
Y10T 403/583	. . . Blocker keeper
Y10T 403/585	. . . Blocked key
Y10T 403/587	. . Blocker is catch or key
Y10T 403/589	. . Cam or thread lock
Y10T 403/59	. Manually releaseable latch type
Y10T 403/591	. . having operating mechanism
Y10T 403/592	. . . Ball detent
Y10T 403/593	. . . Remotely actuated
Y10T 403/595	. . . Lever
Y10T 403/597	. . Swiveled bolt
Y10T 403/598	. . Transversely sliding pin
Y10T 403/599	. . Spring biased manipulator
Y10T 403/60	. Biased catch or latch
Y10T 403/602	. . by separate spring
Y10T 403/604	. . . Radially sliding catch
Y10T 403/606	. . Leaf spring
Y10T 403/608	. . Pivoted
Y10T 403/61	. Side slide: elongated co-linear members
Y10T 403/62	. Annular recess is joint component
Y10T 403/63	. Convergent interface
Y10T 403/635	. . Tapered
Y10T 403/64	. Interconnected flanges or shoulders
Y10T 403/642	. . Separate flange or shoulder
Y10T 403/645	. . Axially bolted or riveted
Y10T 403/648	. . Clamped

Y10T 403/65	. Scarf
Y10T 403/655	. . Mirror images
Y10T 403/66	. Interfitted members with external bridging piece
Y10T 403/67	. Thimble: screw or cam
Y10T 403/68	. Screw or cam
Y10T 403/69	. Axially split or separable member
Y10T 403/70	. Interfitted members
Y10T 403/7001	. . Crossed rods
Y10T 403/7003	. . . One rod is encompassed by the other
Y10T 403/7005	. . Lugged member, rotary engagement
Y10T 403/7007	. . . Bayonet joint
Y10T 403/7009	. . Rotary binding cam or wedge
Y10T 403/7011	. . . Radially interposed shim or bushing
Y10T 403/7013	. . . . Arcuate slip
Y10T 403/7015	. . Assembled by plural manipulations of member
Y10T 403/7016	. . Diametric end slot is joint component
Y10T 403/7018	. . including separably interposed key
Y10T 403/7021	. . . Axially extending
Y10T 403/7022	. . . . Resilient
Y10T 403/7024	. . . . Longitudinally stepped or tapered
Y10T 403/7026	. . Longitudinally splined or fluted rod
Y10T 403/7028	. . . Splayed or having a cam surface for anti-backlash
Y10T 403/7031	. . . Rod designed to be manipulable, e.g., twistable, within coupling for quick disconnect
Y10T 403/7032	. . . including a means, e.g., spring biased portion, for misalignment correction
Y10T 403/7033	. . . including a lock or retainer
Y10T 403/7035	. . . Specific angle or shape of rib, key, groove, or shoulder
Y10T 403/7037	. . Externally shouldered or headed rod
Y10T 403/7039	. . Socket
Y10T 403/7041	. . including set screw
Y10T 403/7043	. . Interfitted angle or channel bars
Y10T 403/7045	. . Interdigitated ends
Y10T 403/7047	. . Radially interposed shim or bushing
Y10T 403/7049	. . . Biased by distinct radially acting means
Y10T 403/7051	. . . Wedging or camming
Y10T 403/7052	. . . . Engaged by axial movement
Y10T 403/7054	. . . . . Plural, circumferentially related shims between members
Y10T 403/7056	. . . . . Threaded actuator
Y10T 403/7058	. . . . . Split or slotted bushing

Y10T 403/7061	. . . Resilient
Y10T 403/7062	. . Clamped members
Y10T 403/7064	. . . by wedge or cam
Y10T 403/7066	. . . . having actuator
Y10T 403/7067	. . . . . Threaded actuator
Y10T 403/7069	. . . . . Axially oriented
Y10T 403/7071	. . . . . Lever actuator
Y10T 403/7073	. . Peripheral enlargement, depression, or slot on one member is joint component
Y10T 403/7075	. . including discrete retainer
Y10T 403/7077	. . . for telescoping members
Y10T 403/7079	. . . . Transverse pin
Y10T 403/7081	. . . . . Multiple retainers
Y10T 403/7083	. . . . . having means to prevent removal of retainer
Y10T 403/7084	. . . . . Bolt, rivet, or screw
Y10T 403/7086	. . . . . Wedge pin
Y10T 403/7088	. . . . . Sliding pin
Y10T 403/7091	. . . . . Expansible retainer
Y10T 403/7092	. . . for interfitted side faces
Y10T 403/7094	. . Enlarged head in complementary recess, e.g., dovetail, etc.
Y10T 403/7096	. . Rigid angle
Y10T 403/7098	. . Non-circular rod section is joint component
Y10T 403/71	. Rod side to plate or side
Y10T 403/7105	. . Connected by double clamp
Y10T 403/7111	. . Shackle is integral with or independently attached to proximate side of plate or other side
Y10T 403/7117	. . Flanged or grooved rod
Y10T 403/7123	. . Traversed by connector
Y10T 403/7129	. . Laterally spaced rods
Y10T 403/7135	. . . by separable shim or bushing in connector
Y10T 403/7141	. . . Plural channels in connector
Y10T 403/7147	. . Connected by flexible tie
Y10T 403/7152	. . Lapped rod ends
Y10T 403/7158	. . Diagonal connector
Y10T 403/7164	. . One rod held between bight and other rod extending through aperture in leg of connector
Y10T 403/7171	. . Two rods encompassed by single connector
Y10T 403/7176	. . Resilient clip
Y10T 403/7182	. . Yoke or ring-type connector
Y10T 403/7188	. . . Rod received in open channel
Y10T 403/7194	. . Crossed rods

- Y10T 403/72 . Miter joint
- Y10T 403/725 . . Connector bridges inner or outer periphery
- Y10T 403/73 . Rigid angle
- Y10T 403/74 . Particular configuration or material of member
- Y10T 403/75 . having a joining piece extending through aligned openings in plural members
- Y10T 403/76 . having a cam, wedge, or tapered portion
- Y10T 403/77 . Miscellaneous

Former US Class 407 Series

- Y10T 407/00** **Cutters, for shaping**
- Y10T 407/10 . including noncutting work modifying means
- Y10T 407/11 . including chip breaker, guide or deflector detachable from tool and tool holder
- Y10T 407/112 . . Adjustable relative to cutting edge
- Y10T 407/114 . . . including adjusting means
- Y10T 407/116 . . Attached to or integral with tool clamping jaw
- Y10T 407/118 . . Chip breaker
- Y10T 407/12 . Freely movable cutting edge
- Y10T 407/13 . Yieldable tool
- Y10T 407/134 . . Resiliently mounted tool
- Y10T 407/137 . . . including yield stress or flexure limit adjusting means
- Y10T 407/14 . with means to apply fluid to cutting tool
- Y10T 407/15 . Rotary broach
- Y10T 407/16 . Rectilinear broach
- Y10T 407/1614 . . Hollow tool for surrounding workpiece
- Y10T 407/1628 . . including holder having seat for inserted tool
- Y10T 407/1642 . . . Annular tool
- Y10T 407/1657 . . . including single tooth
- Y10T 407/1671 . . Plural tooth groups
- Y10T 407/1685 . . including sequentially acting teeth of stepped cutting width
- Y10T 407/17 . Gear cutting tool
- Y10T 407/1705 . . Face mill gear cutting tool
- Y10T 407/171 . . . Adjustable teeth
- Y10T 407/1715 . . Hob
- Y10T 407/172 . . . Thread cutting
- Y10T 407/1725 . . . including holder having seat for inserted tool
- Y10T 407/173 . . . for cutting involute gear tooth
- Y10T 407/1735 . . Rotary, gear shaving cutting tool
- Y10T 407/174 . . Gear generating, revolving shaper cutting tool
- Y10T 407/1745 . . Rotary, tooth form cutting tool

Y10T 407/18	. File or rasp
Y10T 407/1805	. . Flexible blade or carrier therefor
Y10T 407/181	. . Tire rasp
Y10T 407/1815	. . Rotary file or round disc
Y10T 407/182	. . Composite, diverse sector, or assembled
Y10T 407/1825	. . Handle or holder, <u>per se</u>
Y10T 407/19	. Rotary cutting tool
Y10T 407/1902	. . Gang
Y10T 407/1904	. . Composite body of diverse material
Y10T 407/1906	. . including holder [i.e., head] having seat for inserted tool
Y10T 407/1908	. . . Face or end mill
Y10T 407/191	. . . . Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/1912	. . . . Tool adjustable relative to holder
Y10T 407/1914	. . . . . Radially
Y10T 407/1916	. . . . . And axially
Y10T 407/1918	. . . . . Selectively
Y10T 407/192	. . . . with separate means to fasten tool to holder
Y10T 407/1922	. . . . . Wedge clamp element
Y10T 407/1924	. . . . Specified tool shape
Y10T 407/1926	. . . Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/1928	. . . Tool adjustable relative to holder
Y10T 407/193	. . . . Radially
Y10T 407/1932	. . . with means to fasten tool seat to holder
Y10T 407/1934	. . . with separate means to fasten tool to holder
Y10T 407/1936	. . . . Apertured tool
Y10T 407/1938	. . . . Wedge clamp element
Y10T 407/194	. . . . . Resilient clamp jaw
Y10T 407/1942	. . . Peripherally spaced tools
Y10T 407/1944	. . . . Sectional support
Y10T 407/1946	. . Face or end mill
Y10T 407/1948	. . . with cutting edge entirely across end of tool [e.g., router bit, end mill, etc.]
Y10T 407/195	. . Compound tooth arrangement
Y10T 407/1952	. . Having peripherally spaced teeth
Y10T 407/1954	. . . Axially tapering tool
Y10T 407/1956	. . . Circumferentially staggered
Y10T 407/1958	. . . . Plural teeth spaced about a helix
Y10T 407/196	. . . Varying in cutting edge profile
Y10T 407/1962	. . . Specified tooth shape or spacing

Y10T 407/1964	. . . . Arcuate cutting edge
Y10T 407/1966	. . . . Helical tooth
Y10T 407/20	. Profiled circular tool
Y10T 407/21	. Arc segment tool
Y10T 407/22	. including holder having seat for inserted tool
Y10T 407/2202	. . Plural spaced seats and common holder
Y10T 407/2204	. . . Relatively adjustable seats
Y10T 407/2206	. . . Simultaneously usable
Y10T 407/2208	. . Plural simultaneously usable separable tools in common seat or common clamp actuator for plural simultaneously usable tools
Y10T 407/221	. . . Adjustable tool
Y10T 407/2212	. . with tool ejector
Y10T 407/2214	. . with separate means to adjust tool to and fro relative to holder
Y10T 407/2216	. . . with indicator
Y10T 407/2218	. . . Plural provisions for adjustment
Y10T 407/222	. . . by moving tool seat
Y10T 407/2222	. . Tool adjustable relative to holder
Y10T 407/2224	. . . with indicator
Y10T 407/2226	. . . Plural provisions for adjustment
Y10T 407/2228	. . . . Plural interfering seats
Y10T 407/223	. . . . including pivotable seat or tool
Y10T 407/2232	. . . . with detent
Y10T 407/2234	. . . . Pivoted seat
Y10T 407/2236	. . . . . And pivotable tool
Y10T 407/2238	. . . by adjustable or replaceable stop
Y10T 407/224	. . . . Adjustable
Y10T 407/2242	. . . . . Screw
Y10T 407/2244	. . . by movement of seat relative to holder
Y10T 407/2246	. . . . Pivoted seat
Y10T 407/2248	. . . Pivoted tool
Y10T 407/225	. . . Resiliently biased tool clamping jaw
Y10T 407/2252	. . . Rectilinearly
Y10T 407/2254	. . . . including rotatable cam clamp element
Y10T 407/2256	. . . . including wedge clamp element
Y10T 407/2258	. . . . . And guide or detent
Y10T 407/226	. . . . including detent
Y10T 407/2262	. . . . Tool gripped directly by set screw
Y10T 407/2264	. . . . Slidable jaw
Y10T 407/2266	. . Holder adapted for tools of different shape
Y10T 407/2268	. . with chip breaker, guide or deflector

- Y10T 407/227 . . with separate means to fasten tool seat to holder
- Y10T 407/2272 . . with separate means to fasten tool to holder
- Y10T 407/2274 . . . Apertured tool
- Y10T 407/2276 with means projecting through aperture to force tool laterally against reaction surface
- Y10T 407/2278 Tilting clamp element and separate means to tilt same
- Y10T 407/228 . . . Rotatable cam clamp element
- Y10T 407/2282 . . . including tool holding clamp and clamp actuator
- Y10T 407/2284 Wedge clamp element
- Y10T 407/2286 Resiliently biased clamp jaw
- Y10T 407/2288 Integral with holder
- Y10T 407/229 Pivoted jaw
- Y10T 407/2292 Slidable jaw
- Y10T 407/23 . . including tool having plural alternatively usable cutting edges
- Y10T 407/235 . . with integral chip breaker, guide or deflector
- Y10T 407/24 . . with chip breaker, guide or deflector
- Y10T 407/245 . . comprising concave surface in cutting face of tool
- Y10T 407/25 . . including cut off tool
- Y10T 407/26 . . comprising cutting edge bonded to tool shank
- Y10T 407/27 . . comprising tool of specific chemical composition
- Y10T 407/28 . . Miscellaneous

Former US Class 408 Series

- Y10T 408/00 Cutting by use of rotating axially moving tool**
- Y10T 408/03 . . Processes
- Y10T 408/04 . . . Bit detachable
- Y10T 408/05 . . with means to weigh or test work or product
- Y10T 408/08 . . with means to regulate operation by use of templet, tape, card, or other replaceable information supply
- Y10T 408/10 . . with interlock between machine elements
- Y10T 408/13 . . with randomly-actuated stopping means
- Y10T 408/14 . . . Responsive to condition of Tool or tool-drive
- Y10T 408/15 . . . Responsive to condition of work or product
- Y10T 408/16 . . with control means energized in response to activator stimulated by condition sensor
- Y10T 408/165 . . . to control Tool rotation
- Y10T 408/17 . . . to control infeed
- Y10T 408/172 Responsive to Tool
- Y10T 408/173 Responsive to work
- Y10T 408/175 . . . to control relative positioning of Tool and work

- Y10T 408/18 . with stopping upon completion of prescribed operation
- Y10T 408/20 . . Responsive to condition of work or product
- Y10T 408/21 . with signal, indicator, illuminator or optical means
- Y10T 408/23 . including means to cause Tool to progressively vibrate toward work
- Y10T 408/26 . with means to condition tool
- Y10T 408/29 . with means to deForm work temporarily
- Y10T 408/31 . Convertible cutting means
- Y10T 408/33 . . Utilizing common cutting Tool
- Y10T 408/34 . Combined cutting means
- Y10T 408/344 . . including Tool operating on rotating work
- Y10T 408/348 . . Plural other type cutting means
- Y10T 408/35 . . . including plural rotating tools
- Y10T 408/352 . . including rotating cutter other than rotating, axially moving Tool
- Y10T 408/353 . . . Crystalline cutter
- Y10T 408/355 . . . Utilized in cutting work or product to length
- Y10T 408/3555 Adapted to cut entire thickness of work at one pass
- Y10T 408/356 . . including plunging [single stroke] cutter
- Y10T 408/36 . Machine including plural tools
- Y10T 408/365 . . Axes of tools moving with work during operation
- Y10T 408/367 . . . including means to infeed Tool and means to infeed work or including coaxial tools
- Y10T 408/368 . . . Plural work stations
- Y10T 408/37 . . Turret of tools
- Y10T 408/375 . . Coaxial tools
- Y10T 408/378 . . . Coaxial, opposed tools
- Y10T 408/3784 with additional, converging Tool
- Y10T 408/3788 Plural pairs of coaxial, opposed tools
- Y10T 408/3792 with means to sequentially feed tools toward work
- Y10T 408/3796 with interconnected means to simultaneously feed tools
- Y10T 408/38 . . Plural, simultaneously operational tools
- Y10T 408/3806 . . . with plural simultaneously operational work stations
- Y10T 408/3809 Successively acting on workpiece
- Y10T 408/381 Pivotaly mounted, work-advancing, work-supporting means, pivot-axis parallel to tool-axis
- Y10T 408/3811 . . . with provision for adjustment of relationship of axes
- Y10T 408/3817 . . . at least one Tool driven by orbiting wrist plate
- Y10T 408/3822 . . . at least one Tool including flexible drive connection
- Y10T 408/3828 . . . with work-infeed
- Y10T 408/3833 . . . with means to advance work relative to Tool
- Y10T 408/3839 . . . with presser-foot

- Y10T 408/3844 . . . with tool-opposing, work-engaging surface
- Y10T 408/385 . . Rotatable about parallel axes
- Y10T 408/39 . with radially outer limit of cutting edge moving to define cylinder partially, but not entirely encircled by work
- Y10T 408/42 . Axis of Tool moving with work during operation
- Y10T 408/44 . with means to apply transient, fluent medium to work or product
- Y10T 408/45 . . including Tool with duct
- Y10T 408/453 . . . and means to move gaseous fluid by application of vacuum
- Y10T 408/455 . . . Conducting channel extending to end of Tool
- Y10T 408/458 . . . including nozzle
- Y10T 408/46 . . including nozzle
- Y10T 408/47 . with work-infeed means
- Y10T 408/476 . . Driven by fluid motor
- Y10T 408/482 . . Driven by means having sliding engagement therewith
- Y10T 408/488 . . Driven by lever or connecting link
- Y10T 408/494 . . and gear to drive infeed means
- Y10T 408/50 . with product handling or receiving means
- Y10T 408/51 . . Ejector
- Y10T 408/52 . with work advancing or guiding means
- Y10T 408/54 . . Means to intermittently advance work
- Y10T 408/545 . . . Rotary, work-supporting means
- Y10T 408/55 . with work-engaging structure other than Tool or tool-support
- Y10T 408/551 . . with means actuated by work to release Tool from fixed position in Tool support
- Y10T 408/552 . . . Adapted to engage work at tool-axis
- Y10T 408/553 . . Centering means adapted to be replaced by Tool
- Y10T 408/554 . . Magnetic or suction means
- Y10T 408/556 . . Tool supporting wheel
- Y10T 408/5565 . . . Wheel-axis parallel to tool-axis
- Y10T 408/557 . . Frictionally engaging sides of opening in work
- Y10T 408/558 . . . Opening coaxial with Tool
- Y10T 408/5583 Engaging sides of opening being enlarged by Tool
- Y10T 408/5584 Engaging surface axially advanced of tool-action
- Y10T 408/5586 Engaging surface subsequent to tool-action on that surface
- Y10T 408/5587 Valve fitting
- Y10T 408/559 . . Funnel like work-engaging surface cooperating with protuberance on work
- Y10T 408/56 . . Adapted to "form" recession in work
- Y10T 408/5605 . . . Recession at tool-axis
- Y10T 408/561 . . Having tool-opposing, work-engaging surface
- Y10T 408/5612 . . . Tool having shiftable tool-axis

Y10T 408/5614	. . .	Angularly adjustable surface
Y10T 408/5616	. . . .	Adjustable about axis that is parallel to tool-axis
Y10T 408/5617	. . .	Laterally adjustable surface
Y10T 408/5619	. . .	Flexible or concatenated member
Y10T 408/5621	. . .	Connected to Tool through opening being enlarged by Tool
Y10T 408/5622	. . . .	Plural, coaxially opposing, work-engaging means
Y10T 408/5623	. . .	with presser foot
Y10T 408/56238	. . . .	Encompassed by Tool during cut
Y10T 408/56245	. . . .	including tool-guide [or bushing]
Y10T 408/56253	. . . .	Base supported machine
Y10T 408/5626	. . .	with means to move Tool relative to other work-engaging structure along tool-axis
Y10T 408/5627	. . . .	Having sliding engagement therewith
Y10T 408/56275	. . . . .	Screw coaxial with Tool
Y10T 408/5628	. . .	Tool having screw-thread engaging frame to cause infeed
Y10T 408/563	. .	Work-gripping clamp
Y10T 408/5633	. . .	Adapted to coaxially grip round work
Y10T 408/56337	. . . .	Oppositely moving lateral clamps
Y10T 408/5634	. . . . .	Three or more moving clamps
Y10T 408/56343	. . . .	Base supported clamp
Y10T 408/5635	. . .	Oppositely moving lateral clamps
Y10T 408/5638	. . .	Adjustable relative to tool-axis
Y10T 408/564	. .	Movable relative to Tool along tool-axis
Y10T 408/5647	. . .	including means to move Tool
Y10T 408/5653	. . .	with means to bias Tool away from work
Y10T 408/566	. .	Axially fixed to Tool
Y10T 408/5665	. . .	Work-engaging surface parallel to tool-axis
Y10T 408/567	. .	Adjustable, tool-guiding jig
Y10T 408/568	. . .	Guide bushing
Y10T 408/569	. .	Bushing
Y10T 408/57	. .	Tool-support with means to receive tool-position indicator
Y10T 408/60	. .	Plural tool-assemblages
Y10T 408/62	. .	Coaxial
Y10T 408/625	. . .	Spring biased
Y10T 408/63	. .	Tool or tool-support with torque-applying ratchet
Y10T 408/637	. .	with thrust applying means
Y10T 408/639	. . .	Reversible ratchet
Y10T 408/641	. . .	Double-acting ratchet
Y10T 408/643	. .	Reversible ratchet
Y10T 408/65	. .	Means to drive tool

- Y10T 408/655 . . with specific Tool structure
- Y10T 408/66 . . Friction gearing
- Y10T 408/665 . . Universal or flexible drive connection to rotate Tool
- Y10T 408/67 . . Belt and pulley
- Y10T 408/675 . . including means to move Tool along tool-axis
- Y10T 408/6757 . . . Fluid means
- Y10T 408/6764 . . . Laterally adjustable Tool
- Y10T 408/6771 . . . with clutch means
- Y10T 408/6774 including plural speed drive
- Y10T 408/6776 Actuated by Tool movement
- Y10T 408/6779 . . . Rack and pinion
- Y10T 408/6786 . . . Manually moved lever
- Y10T 408/6793 . . . Screw coaxial with Tool
- Y10T 408/68 . Tool or tool-support with thrust-applying machine-engaging screw
- Y10T 408/70 . Tool or tool-support with torque-applying clutch
- Y10T 408/72 . . Friction clutch
- Y10T 408/73 . Tool or tool-support with torque-applying spline
- Y10T 408/75 . . Relative motion of splined shaft and tool-support causing release of Tool from operating position
- Y10T 408/76 . Tool-carrier with vibration-damping means
- Y10T 408/78 . Tool of specific diverse material
- Y10T 408/81 . Tool having crystalline cutting edge
- Y10T 408/83 . Tool-support with means to move Tool relative to tool-support
- Y10T 408/85 . . to move radially
- Y10T 408/852 . . . with Tool releasing trigger
- Y10T 408/853 and separate Tool setting means
- Y10T 408/854 . . . to move eccentrically mounted Tool
- Y10T 408/855 Tool-support including plural, adjustable sections
- Y10T 408/856 . . . Moving means including pinion engaging rack-like surface of Tool
- Y10T 408/858 . . . Moving means including wedge, screw or cam
- Y10T 408/8583 with resiliently urged Tool
- Y10T 408/85837 with spring retainer
- Y10T 408/85843 Resilient Tool or tool-support
- Y10T 408/8585 including oppositely moving, diverging tools
- Y10T 408/8588 Axially slidable moving-means
- Y10T 408/85884 Tool pivotally mounted on support
- Y10T 408/85888 Having axially spaced shoulders
- Y10T 408/85892 Screw driven wedge or cam
- Y10T 408/85893 Screw with axis radially spaced from tool-axis
- Y10T 408/85894 Annular wedge-collar

Y10T 408/858945	. . . . .	Axially spaced tool-retaining collars
Y10T 408/858946	. . . . .	with travelling wedge
Y10T 408/858948	. . . . .	Tool having axially facing, collar-receiving groove
Y10T 408/858949	. . . . .	including two-piece collar
Y10T 408/85895	. . . . .	Traveling wedge
Y10T 408/858953	. . . . .	Interfitting, tool-retaining wedge
Y10T 408/858955	. . . . .	including separable interfitting element
Y10T 408/858957	. . . . .	Having externally threaded shank connected to tool-support
Y10T 408/85896	. . . . .	Annular wedge-collar
Y10T 408/859	. . . . .	Rotary cam
Y10T 408/8591	. . . . .	Scroll plate
Y10T 408/85913	. . . . .	Volute scroll
Y10T 408/85915	. . . . .	with means to rotate scroll
Y10T 408/85918	. . . . .	with adjustable means to limit scroll movement
Y10T 408/8592	. . . . .	Coaxial with tool-axis
Y10T 408/8593	. . . . .	Wedge moving perpendicular to tool-axis
Y10T 408/8595	. . . . .	Pivotable tool-support
Y10T 408/8598	. . . . .	Screw extending perpendicular to tool-axis
Y10T 408/85985	. . . . .	Plural tools moved by diametrically opposed screws
Y10T 408/85988	. . . . .	Screws mounted on common shaft
Y10T 408/8599	. . . . .	Tool having pitch-stabilizing ridge
Y10T 408/85995	. . . . .	with tool-holding clamp and clamp actuator
Y10T 408/86	. . . . .	Tool-support with means to permit positioning of the Tool relative to support
Y10T 408/865	. . . . .	Pivotable Tool
Y10T 408/868	. . . . .	with multiple cutting positions
Y10T 408/87	. . . . .	Tool having stepped cutting edges
Y10T 408/8713	. . . . .	including means to permit both radial and axial positioning of edge
Y10T 408/8725	. . . . .	including means to permit relative axial positioning of edges
Y10T 408/8729	. . . . .	with work-engaging structure other than cutting edge
Y10T 408/8734	. . . . .	including central Tool axially movable relative to support
Y10T 408/8738	. . . . .	including inverse cutting edge
Y10T 408/875	. . . . .	including means to "form" depression in work
Y10T 408/88	. . . . .	including central-lead
Y10T 408/885	. . . . .	including tool-holding clamp and clamp actuator
Y10T 408/888	. . . . .	Movable along tool-axis
Y10T 408/89	. . . . .	Tool or Tool with support
Y10T 408/892	. . . . .	with work-engaging structure detachable from cutting edge
Y10T 408/8923	. . . . .	Removable central lead
Y10T 408/8925	. . . . .	Depth-limiting member
Y10T 408/8928	. . . . .	Adjustable

- Y10T 408/893 . . Hollow milling Tool
- Y10T 408/895 . . Having axial, core-receiving central portion
- Y10T 408/8953 . . . with lateral outlet
- Y10T 408/8957 . . . and having stepped cutting edges
- Y10T 408/896 . . Having product-receiving chamber
- Y10T 408/8967 . . . and central lead-screw
- Y10T 408/8973 . . . and central lead
- Y10T 408/898 . . Helical ribbon Tool
- Y10T 408/899 . . Having inversely angled cutting edge
- Y10T 408/90 . . . and axially extending peripheral cutting spur
- Y10T 408/901 . . Having axially extending peripheral cutting spur
- Y10T 408/902 . . Having central lead-screw
- Y10T 408/904 . . with pitch-stabilizing ridge
- Y10T 408/9042 . . . and radially spaced cutting edge
- Y10T 408/9044 . . . including cutting teeth of different width
- Y10T 408/9045 and different root circles
- Y10T 408/9046 . . . including tapered section
- Y10T 408/90467 and relieved cutting edge
- Y10T 408/90473 including work-embracing cutting edges
- Y10T 408/9048 . . . Extending outwardly from tool-axis
- Y10T 408/905 . . Having stepped cutting edges
- Y10T 408/906 . . . Axially spaced
- Y10T 408/9065 with central lead
- Y10T 408/907 . . including detailed shank
- Y10T 408/909 . . Having peripherally spaced cutting edges
- Y10T 408/9093 . . . Each formed by a pair of axially facing facets
- Y10T 408/9095 . . . with axially extending relief channel
- Y10T 408/9097 Spiral channel
- Y10T 408/9098 . . . with means to retain Tool to support
- Y10T 408/90987 Wedge means
- Y10T 408/90993 Screw driven means
- Y10T 408/91 . . Machine frame
- Y10T 408/92 . . with counterweight mechanism
- Y10T 408/93 . . including pivotally mounted tool-carrier
- Y10T 408/935 . . . including laterally movable tool-carrier
- Y10T 408/94 . . Tool-support
- Y10T 408/95 . . with tool-retaining means
- Y10T 408/953 . . . Clamping jaws
- Y10T 408/957 . . . Tool adapter
- Y10T 408/96 . . Miscellaneous

- Y10T 408/97 . . Drill bushings
- Y10T 408/98 . . Drill guide
- Y10T 408/99 . . Adjustable stop

Former US Class 409 Series

Y10T 409/00 Gear cutting, milling, or planing

- Y10T 409/10 . Gear cutting
- Y10T 409/100159 . . with regulation of operation by use of templet, card, or other replaceable information supply
- Y10T 409/100318 . . . including follower for templet
- Y10T 409/100477 . . and burnishing simultaneously
- Y10T 409/100636 . . with compensation for backlash in drive means
- Y10T 409/100795 . . with work or product advancing
- Y10T 409/100954 . . . Utilizing transfer arm
- Y10T 409/101113 . . Gear chamfering or deburring
- Y10T 409/101272 . . . Using relatively reciprocating or oscillating cutter
- Y10T 409/101431 . . Gear tooth shape generating
- Y10T 409/10159 . . . Hobbing
- Y10T 409/101749 Process
- Y10T 409/101908 Generating tooth for bevel gear
- Y10T 409/102067 including means to shift hob between cutting passes
- Y10T 409/102226 with control means energized in response to activator stimulated by condition sensor
- Y10T 409/102385 Plural hobs
- Y10T 409/102544 including infeed means
- Y10T 409/102703 to infeed along axis of work rotation
- Y10T 409/102862 Infeed of cutter
- Y10T 409/103021 and infeed radially of axis of work rotation
- Y10T 409/10318 Vertically
- Y10T 409/103339 to infeed radially of axis of work rotation
- Y10T 409/103498 Infeed of cutter
- Y10T 409/103657 and infeed tangentially of work axis
- Y10T 409/103816 . . . Milling with radial faced tool
- Y10T 409/103975 Process
- Y10T 409/104134 Adapted to cut bevel gear
- Y10T 409/104293 with means to continuously rotate work and means to co-form all teeth of gear
- Y10T 409/104452 Bevel gear having nonparallel opposing tooth flanks
- Y10T 409/104611 including rotary cutter cradle

Y10T 409/10477	. . .	by relative axial movement between synchronously indexing or rotating work and cutter
Y10T 409/104929	. . . .	Crowning
Y10T 409/105088	. . . .	Displacing cutter axially relative to work [e.g., gear shaving, etc.]
Y10T 409/105247	. . . . .	Using gear shaper-cutter
Y10T 409/105406	. . . . .	Plural distinct cutting edges
Y10T 409/105565	. . . . .	Cutting rotating work, the axis of which lies in a plane intersecting the cutter axis
Y10T 409/105724	. . .	Gear shaving
Y10T 409/105883	. . .	Using rotary cutter
Y10T 409/106042	. . . .	having axially directed cutting edge
Y10T 409/106201	. . . .	Plural rotary cutters
Y10T 409/10636	. . . .	On reciprocating carriage
Y10T 409/106519	. . .	Using reciprocating or oscillating cutter
Y10T 409/106678	. . . .	Bevel gear cutting
Y10T 409/106837	. . . . .	Dual cutters
Y10T 409/106996	. . . . .	Double acting cutter
Y10T 409/107155	. . . .	Rectilinearly reciprocating cutter
Y10T 409/107314	. . . . .	Cutter comprising a rack
Y10T 409/107473	. . .	Making a noncircular gear, worm, rotor, or a planar-faced gear
Y10T 409/107632	. .	Gear shaving
Y10T 409/107791	. .	Using rotary cutter
Y10T 409/10795	. . .	Process
Y10T 409/108109	. . .	End mill
Y10T 409/108268	. . . .	Radially faced
Y10T 409/108427	. . . . .	Using plural, selectively usable tools
Y10T 409/108586	. . .	Plural rotary cutters
Y10T 409/108745	. . .	Cutting action along work axis
Y10T 409/108904	. . . .	Cutting action intersecting work axis
Y10T 409/109063	. .	Using reciprocating or oscillating cutter
Y10T 409/109222	. . .	Broach
Y10T 409/109381	. . .	including circumferentially disposed cutting edges
Y10T 409/10954	. .	Work dividing or checking of work position or division
Y10T 409/109699	. .	with work clamping
Y10T 409/20	. .	with refurbishing of cutter
Y10T 409/30	. .	Milling
Y10T 409/300056	. .	Thread or helix generating
Y10T 409/300112	. . .	Process
Y10T 409/300168	. . .	with means to regulate operation by use of templet, card, or other replaceable information supply
Y10T 409/300224	. . . .	Complete cycle

Y10T 409/30028	. . . .	to regulate cutting depth [e.g., relief, taper, etc.]
Y10T 409/300336	. . . .	to regulate rate of motion [e.g., stopping, etc.]
Y10T 409/300392	. . .	with nonthread or nonhelix generating, milling cutter
Y10T 409/300448	. . .	with means to advance work or product
Y10T 409/300504	. . .	Plural cutters or work holders
Y10T 409/30056	. . .	with planetary cutter
Y10T 409/300616	. . .	Work means to move work axially and means to interrelate work movement with cutter rotation
Y10T 409/300672	. . .	with means to rotate work and means to interrelatedly infeed the work relative to the cutter
Y10T 409/300728	. . . .	Means to infeed the cutter
Y10T 409/300784	. . .	with means to circumferentially adjust the position of the cutter with respect to the work
Y10T 409/30084	. .	with regulation of operation by templet, card, or other replaceable information supply
Y10T 409/300896	. . .	with sensing of numerical information and regulation without mechanical connection between sensing means and regulated means [i.e., numerical control]
Y10T 409/300952	. . .	to cut lock key
Y10T 409/301008	. . . .	Using templet other than a key
Y10T 409/301064	. . . .	Complete cycle
Y10T 409/30112	. . .	Process
Y10T 409/301176	. . .	Reproducing means
Y10T 409/301232	. . . .	including pantograph cutter-carrier
Y10T 409/301288	. . . . .	and means to move work at work station
Y10T 409/301344	. . . . .	About work axis
Y10T 409/3014	. . . . .	Pivotally supported for vertical movement
Y10T 409/301456	. . . . .	and means to counterbalance carrier
Y10T 409/301512	. . . . .	including plural cutters
Y10T 409/301568	. . . . .	by use of pivotally supported tracer
Y10T 409/301624	. . . . .	Duplicating means
Y10T 409/30168	. . . . .	with means for operation without manual intervention
Y10T 409/301736	. . . . .	to make a double curvature foil
Y10T 409/301792	. . . . .	including means to sense optical or magnetic image
Y10T 409/301848	. . . . .	with means to support templet above or under work
Y10T 409/301904	. . . . .	including tracer adapted to trigger electrical energy
Y10T 409/30196	. . . . .	to actuate electrically driven work or tool moving means
Y10T 409/302016	. . . . .	to actuate fluid driven work or tool moving means
Y10T 409/302072	. . . . .	including tracer adapted to trigger fluid energy
Y10T 409/302128	. . . . .	to actuate fluid driven work or tool moving means
Y10T 409/302184	. . . . .	including cutter and tracer fixed to move laterally together

Y10T 409/30224	. . . . .	and provision for circumferential relative movement of cutter and work
Y10T 409/302296	. . . . .	including plural cutters
Y10T 409/302352	. . . . .	including plural cutters
Y10T 409/302408	. . . . .	including cross-slide tool carrier
Y10T 409/302464	. . . . .	including plural cutters
Y10T 409/30252	. . . . .	including cross-slide tool carrier
Y10T 409/302576	. . . . .	with means to support templet above or under work
Y10T 409/302632	. . . . .	with provision for circumferential relative movement of cutter and work
Y10T 409/302688	. . . . .	with provision for circumferential relative movement of cutter and work
Y10T 409/302744	. . . . .	and means for operation without manual intervention
Y10T 409/3028	. . . . .	including tracer adapted to trigger electrical or fluid energy
Y10T 409/302856	. . . . .	For using planar templet in cutting profile [e.g., contour map from planar map, etc.]
Y10T 409/302912	. . . . .	including means for operation without manual intervention
Y10T 409/302968	. . . . .	including means for operation without manual intervention
Y10T 409/303024	. . . . .	including simultaneously usable plural tracers or including tracer adapted to simultaneously use plural templates
Y10T 409/30308	. . . . .	to make a double curvature foil
Y10T 409/303136	. . . . .	to make a double curvature foil
Y10T 409/303192	. . . . .	including cutter and tracer fixed to move together
Y10T 409/303248	. . . . .	with provision for circumferential relative movement of cutter and work
Y10T 409/303304	. . . . .	and provision for circumferential relative movement of cutter and work
Y10T 409/30336	. . . . .	including cutter and tracer fixed to move together
Y10T 409/303416	. . . . .	Templet, tracer, or cutter
Y10T 409/303472	. . . . .	Tracer
Y10T 409/303528	. . . . .	Adapted to trigger electrical energy
Y10T 409/303584	. . . . .	Photocell
Y10T 409/30364	. . . . .	Adapted to trigger fluid energy
Y10T 409/303696	. . . . .	Templet
Y10T 409/303752	. . . . .	Process
Y10T 409/303808	. . . . .	including infeeding
Y10T 409/303864	. . . . .	with means to weigh or test work or product
Y10T 409/30392	. . . . .	with means to protect operative or machine [e.g., guard, safety device, etc.]
Y10T 409/303976	. . . . .	with means to control temperature or lubricate
Y10T 409/304032	. . . . .	Cutter or work
Y10T 409/304088	. . . . .	with means to remove chip
Y10T 409/304144	. . . . .	Means to trim edge
Y10T 409/3042	. . . . .	Means to remove scale or raised surface imperfection
Y10T 409/304256	. . . . .	Means to remove flash or burr

Y10T 409/304312	. .	with means to dampen vibration
Y10T 409/304368	. .	Means to mill epitrochoidal shape
Y10T 409/304424	. .	Means for internal milling
Y10T 409/304448	. .	with detachable or auxiliary cutter support to convert cutting action
Y10T 409/304536	. .	including means to infeed work to cutter
Y10T 409/304592	. . .	with compensation for backlash in drive means
Y10T 409/304648	. . .	with control means energized in response to activator stimulated by condition sensor
Y10T 409/304704	. . . .	In response to cutter or cutter carriage
Y10T 409/30476	. . . .	In response to work or work carriage
Y10T 409/304816	. . . . .	to control rate of infeed or return
Y10T 409/304872	. . . . .	to control limit of infeed
Y10T 409/304928	. . . . .	Adapted to hydraulically or pneumatically stimulate control
Y10T 409/304984	. . . . .	Adapted to electrically stimulate control
Y10T 409/30504	. . . .	to control rate of infeed or return
Y10T 409/305096	. . . .	to effect stopping of infeed
Y10T 409/305152	. . .	with means to change rate of infeed
Y10T 409/305208	. . .	Means to mill indeterminate length work
Y10T 409/305264	. . .	Multiple work stations
Y10T 409/30532	. . .	with means to advance work or product
Y10T 409/305376	. . . .	Vertically
Y10T 409/305432	. . . .	Endless or orbital work or product advancing means
Y10T 409/305488	. . .	to reciprocate or oscillate work
Y10T 409/305544	. . .	with work holder
Y10T 409/3056	. . . .	and means to selectively position work
Y10T 409/305656	. . . .	including means to support work for rotation during operation
Y10T 409/305712	. . . . .	and including means to infeed cutter toward work axis
Y10T 409/305768	. . . . .	with linear movement of work
Y10T 409/305824	. . . . .	with angular movement of work
Y10T 409/30588	. . .	including friction gearing drive
Y10T 409/305936	. . .	including fluid drive
Y10T 409/305992	. .	with means to effect stopping upon completion of operation
Y10T 409/306048	. .	with means to advance work or product
Y10T 409/306104	. . .	Endless or orbital work or product advancing means
Y10T 409/30616	. .	with means to precisely reposition work
Y10T 409/306216	. .	Randomly manipulated, work supported, or work following device
Y10T 409/306272	. . .	For machining commutator
Y10T 409/306328	. . .	For cutting longitudinal groove in shaft [e.g., keyway, etc.]
Y10T 409/306384	. . .	with work supported guide means
Y10T 409/30644	. . . .	to guide tool to move in arcuate path

Y10T 409/306496	. . .	with work follower
Y10T 409/306552	. . .	Randomly manipulated
Y10T 409/306608	. . . .	End mill [e.g., router, etc.]
Y10T 409/306664	. .	including means to infeed rotary cutter toward work
Y10T 409/30672	. . .	with means to limit penetration into work
Y10T 409/306776	. . .	Axially
Y10T 409/306832	. . . .	with infeed control means energized in response to activator stimulated by condition sensor
Y10T 409/306888	. . . . .	In response to cutter condition
Y10T 409/306944	. . . . .	In response to work condition
Y10T 409/307	. . . .	with work holder
Y10T 409/307056	. . . .	and laterally
Y10T 409/307112	. . . . .	Simultaneously
Y10T 409/307168	. . . .	Plural cutters
Y10T 409/307224	. . .	with infeed control means energized in response to activator stimulated by condition sensor
Y10T 409/30728	. . . .	In response to cutter condition
Y10T 409/307336	. . . .	In response to work condition
Y10T 409/307392	. . .	with means to change rate of infeed
Y10T 409/307448	. . .	with work holder
Y10T 409/307504	. . . .	Indexable
Y10T 409/30756	. . .	Machining arcuate surface
Y10T 409/307616	. . . .	with means to move cutter eccentrically
Y10T 409/307672	. . .	Angularly adjustable cutter head
Y10T 409/307728	. . .	including gantry-type cutter-carrier
Y10T 409/307784	. . .	Plural cutters
Y10T 409/30784	. .	including means to adjustably position cutter
Y10T 409/307896	. . .	with work holder or guide
Y10T 409/307952	. . .	Linear adjustment
Y10T 409/308008	. . . .	with control for adjustment means responsive to activator stimulated by condition sensor
Y10T 409/308064	. . . . .	Responsive to position of cutter
Y10T 409/30812	. . . . .	and means to clamp cutter support in adjusted position
Y10T 409/308176	. . . .	with position indicator or limit means
Y10T 409/308232	. . . .	and angular adjustment
Y10T 409/308288	. . . .	including gantry-type cutter-carrier
Y10T 409/308344	. . . .	Plural cutters
Y10T 409/3084	. . .	with position indicator or limit means
Y10T 409/308456	. . .	with right angle cutter drive
Y10T 409/308512	. . .	Compound angular adjustment
Y10T 409/308568	. . .	Plural cutters

- Y10T 409/308624 . . with limit means to aid in positioning of cutter bit or work [e.g., gauge, stop, etc.]
- Y10T 409/30868 . . Work support
- Y10T 409/308736 . . . with position indicator or stop
- Y10T 409/308792 . . . Indexable
- Y10T 409/308848 including dividing head
- Y10T 409/308904 Multiple row dividing head
- Y10T 409/30896 . . . with angular adjustment
- Y10T 409/309016 . . . with work holder or guide
- Y10T 409/309072 including cutter limited to rotary motion
- Y10T 409/309128 . . . with means to adjust work support vertically
- Y10T 409/309184 . . including cutter limited to rotary motion
- Y10T 409/30924 . . . Cutter turning about vertical axis
- Y10T 409/309296 . . Detachable or repositionable tool head
- Y10T 409/309352 . . Cutter spindle or spindle support
- Y10T 409/309408 . . . with cutter holder
- Y10T 409/309464 and draw bar
- Y10T 409/30952 . . with cutter holder
- Y10T 409/309576 . . Machine frame
- Y10T 409/309632 . . . Overarm harness structure
- Y10T 409/309688 . . . including counterbalancing means
- Y10T 409/309744 . . . including means to compensate for deformation
- Y10T 409/3098 Deflection of cutter spindle
- Y10T 409/309856 . . . Convertible from lathe
- Y10T 409/309912 . . . including relatively movable components and means to relatively immobilize these components
- Y10T 409/309968 . . Tailstock
- Y10T 409/40 . . Broaching
- Y10T 409/400175 . . Process
- Y10T 409/40035 . . with control means energized in response to activator stimulated by condition sensor
- Y10T 409/400525 . . . Responsive to condition of work or product
- Y10T 409/4007 . . with means to distribute cutter infeed force
- Y10T 409/400875 . . with means to select cutter or to select or modify cutter drive
- Y10T 409/40105 . . with means to clean, lubricate, or modify temperature of work or cutter
- Y10T 409/401225 . . with product handling means
- Y10T 409/4014 . . . Between plural broaching stations
- Y10T 409/401575 . . . Means to eject broached product
- Y10T 409/40175 . . . Chip removal means
- Y10T 409/401925 . . with means to protect operative or machine [e.g., guard, safety device, etc.]
- Y10T 409/4021 . . . with safety means for overload or safety interlock

- Y10T 409/402275 . . with work immobilizer and means to activate work immobilizer interrelated with cutter infeed, work infeed, or work advance
- Y10T 409/40245 . . with work infeed or advancing means and means to clamp the work thereto, which clamping means is interrelated with work or cutter infeed
- Y10T 409/402625 . . Means to remove flash or burr
- Y10T 409/4028 . . Means for cutting groove
- Y10T 409/402975 . . . Arcuate groove in cylindrical surface
- Y10T 409/40315 Rifling
- Y10T 409/403325 . . Orbital carrier for cutter
- Y10T 409/4035 . . Orbital carrier for work
- Y10T 409/403675 . . with means to cyclically manipulate cutter or cutter support
- Y10T 409/40385 . . . to reorient, introduce, or remove cutter
- Y10T 409/404025 . . . Cutter released to interim support at termination of cutting stroke
- Y10T 409/4042 . . . to remove and return cutter to cutter support
- Y10T 409/404375 . . with plural cutters
- Y10T 409/40455 . . with means to advance, infeed, or manipulate work
- Y10T 409/404725 . . . Interrelated with cutter infeed
- Y10T 409/4049 including means supporting work and additional means opposing infeed force
- Y10T 409/405075 including work indexing means for sequential cutting of different surfaces of a single workpiece
- Y10T 409/40525 including work indexing means for sequential cutting of surfaces of different workpieces
- Y10T 409/405425 with means to retract work from path of tool's idle return stroke
- Y10T 409/4056 . . . to infeed work past cutter
- Y10T 409/405775 . . with means to hold work during cutting
- Y10T 409/40595 . . . including work clamping means
- Y10T 409/406125 . . . with means to adjust or facilitate adjustment of work or work holder
- Y10T 409/4063 . . . with means on work or work holder to guide cutter during infeed
- Y10T 409/406475 . . Cutter infeed means
- Y10T 409/40665 . . . Imparting rectilinear motion to cutter
- Y10T 409/406825 and rotary motion to cutter
- Y10T 409/407 Fluid powered means
- Y10T 409/407175 Rack means
- Y10T 409/40735 Screw means
- Y10T 409/407525 . . Machine frame
- Y10T 409/4077 . . Cutter support or guide
- Y10T 409/50 . . Planing
- Y10T 409/500164 . . with regulation of operation by templet, card, or other replaceable information supply
- Y10T 409/500328 . . . including use of tracer adapted to trigger electrical or fluid energy

Y10T 409/500492	. . . .	including provision for circumferential relative movement of cutter and work
Y10T 409/500656	. . .	including provision for circumferential relative movement of cutter and work
Y10T 409/50082	. .	Process
Y10T 409/500984	. .	with means to lubricate
Y10T 409/501148	. .	with product handling means
Y10T 409/501312	. .	Randomly manipulated, work supported, or work following device
Y10T 409/501476	. .	Means to remove flash or burr
Y10T 409/50164	. . .	Elongated work
Y10T 409/501804	. . . .	Flash or burr inside hollow work
Y10T 409/501968	. . . .	Transverse burr
Y10T 409/502132	. . .	Flat work
Y10T 409/502296	. .	of commutator
Y10T 409/50246	. .	Means for trimming edge [e.g., chamfering, scarfing, etc.]
Y10T 409/502624	. .	Means for cutting groove
Y10T 409/502788	. . .	Arcuate groove
Y10T 409/502952	. . . .	For rifling
Y10T 409/503116	. . .	Inside hollow work
Y10T 409/50328	. .	Means for shaving by blade spanning work surface
Y10T 409/503444	. . .	Concave work surface [e.g., bearing, stereotype printing plate, etc.]
Y10T 409/503608	. . .	Circumferential surface
Y10T 409/503772	. . .	including rack driven infeed means
Y10T 409/503936	. . .	including roller infeed means
Y10T 409/5041	. .	Means for cutting arcuate surface
Y10T 409/504264	. . .	Cycloidal surface
Y10T 409/504428	. . .	with work infeed and means to arcuately reposition the cutter
Y10T 409/504592	. . .	with work infeed and means to arcuately reposition the work
Y10T 409/504756	. .	with means to relatively infeed cutter and work
Y10T 409/50492	. . .	and means to rotate work and cutter at same rate about converging axes
Y10T 409/505084	. . .	with plural sequentially acting cutters or with double acting cutter
Y10T 409/505248	. . .	and means to vary rate of infeed
Y10T 409/505412	. . .	Reciprocating work infeed means
Y10T 409/505576	. . . .	with fluid-driven bed
Y10T 409/50574	. . . .	with rack-driven bed
Y10T 409/505904	. . . .	with screw-driven bed
Y10T 409/506068	. . . .	and means to permit repositioning of cutter laterally
Y10T 409/506232	. . .	Reciprocating cutter infeed means
Y10T 409/506396	. . . .	Reciprocating cutter horizontally
Y10T 409/50656	. . . . .	with work support and lead screw to reposition work support

Y10T 409/506724	. . . . .	with fluid-powered means to drive cutter
Y10T 409/506888	. . . . .	with pivoting link to drive cutter
Y10T 409/507052	. . . . .	Link driven by crank
Y10T 409/507216	. . . . .	with rack to drive cutter
Y10T 409/50738	. . . . .	with screw to drive cutter
Y10T 409/507544	. . . . .	with link or cam to drive cutter
Y10T 409/507708	. . . . .	with rack to drive cutter
Y10T 409/507872	. . . . .	including means causing return stroke
Y10T 409/508036	. . . . .	Machine frame
Y10T 409/5082	. . . . .	Means to permit repositioning of cutter
Y10T 409/508364	. . . . .	Laterally
Y10T 409/508528	. . . . .	Plural independently positioned cutters
Y10T 409/508692	. . . . .	including clutch
Y10T 409/508856	. . . . .	including repositioning means and means to effect stopping thereof
Y10T 409/50902	. . . . .	including relatively movable components and means to relatively immobilize these components
Y10T 409/509184	. . . . .	Work table
Y10T 409/509348	. . . . .	Tool head
Y10T 409/509512	. . . . .	with selectively usable cutting edges
Y10T 409/509676	. . . . .	with means to permit repositioning of cutting for idle return stroke
Y10T 409/50984	. . . . .	comprising pivotable cutter or cutter support

Former US Class 428 Series

Y10T 428/00	Stock material or miscellaneous articles
Y10T 428/10	. Liquid crystal optical display having layer of specified composition
Y10T 428/1005	. . Alignment layer of specified composition
Y10T 428/1009	. . . Alignment layer is inorganic
Y10T 428/1014	. . . Silicon compound [i.e., organosilicon]
Y10T 428/1018	. . . Polyamide
Y10T 428/1023	. . . Polyimide
Y10T 428/1027	. . . . Polyimidfluoride
Y10T 428/1032	. . . . Polyimidmetalo
Y10T 428/1036	. . with viewing layer of specified composition
Y10T 428/1041	. . . Polarizer or dye containing viewing layer
Y10T 428/1045	. . . Silicon compound [e.g., glass, organosilicon, etc.]
Y10T 428/105	. . . Ester [e.g., polycarbonate, polyacrylate, etc.]
Y10T 428/1055	. . with charge transferring layer of specified composition
Y10T 428/1059	. . with bonding or intermediate layer of specified composition [e.g., sealant, space, etc.]
Y10T 428/1064	. . . Inorganic layer

Y10T 428/1068	. . . Silicon compound [i.e., organosilicon]
Y10T 428/1073	. . . Epoxy
Y10T 428/1077	. . . Ester
Y10T 428/1082	. . . Unsaturated aliphatic polymer [e.g., vinyl, etc.]
Y10T 428/1086	. . with substrate layer of specified composition
Y10T 428/1091	. . . Releasable substrate layer to expose adhesive
Y10T 428/1095	. . . Inorganic substrate layer [e.g., ceramic, metallic, glass, etc.]
Y10T 428/11	. Magnetic recording head
Y10T 428/1107	. . Magnetoresistive
Y10T 428/1114	. . . having tunnel junction effect
Y10T 428/1121	. . . Multilayer
Y10T 428/1129	. . . . Super lattice [e.g., giant magneto resistance [GMR] or colossal magneto resistance [CMR], etc.]
Y10T 428/1136	. . . Single film
Y10T 428/1143	. . . with defined structural feature
Y10T 428/115	. . Magnetic layer composition
Y10T 428/1157	. . Substrate composition
Y10T 428/1164	. . with protective film
Y10T 428/1171	. . with defined laminate structural detail
Y10T 428/1179	. . . Head with slider structure
Y10T 428/1186	. . . with head pole component
Y10T 428/1193	. . with interlaminar component [e.g., adhesion layer, etc.]
Y10T 428/12	. All metal or with adjacent metals
Y10T 428/12007	. . Component of composite having metal continuous phase interengaged with nonmetal continuous phase
Y10T 428/12014	. . having metal particles
Y10T 428/12021	. . . having composition or density gradient or differential porosity
Y10T 428/12028	. . . Composite; i.e., plural, adjacent, spatially distinct metal components [e.g., layers, etc.]
Y10T 428/12035	. . . . Fiber, asbestos, or cellulose in or next to particulate component
Y10T 428/12042	. . . . Porous component
Y10T 428/12049	. . . . Nonmetal component
Y10T 428/12056	. . . . . Entirely inorganic
Y10T 428/12063	. . . . Nonparticulate metal component
Y10T 428/12069	. . . . . Plural nonparticulate metal components
Y10T 428/12076	. . . . . . Next to each other
Y10T 428/12083	. . . . . . Nonmetal in particulate component
Y10T 428/1209	. . . . . Plural particulate metal components
Y10T 428/12097	. . . . . Nonparticulate component encloses particles
Y10T 428/12104	. . . . . Particles discontinuous

Y10T 428/12111	. . . . .	Separated by nonmetal matrix or binder [e.g., welding electrode, etc.]
Y10T 428/12118	. . . . .	Nonparticulate component has Ni-, Cu-, or Zn-base
Y10T 428/12125	. . . . .	Nonparticulate component has Fe-base
Y10T 428/12132	. . . . .	Next to Fe-containing particles
Y10T 428/12139	. . . . .	Nonmetal particles in particulate component
Y10T 428/12146	. . . . .	Nonmetal particles in a component
Y10T 428/12153	. . . . .	Interconnected void structure [e.g., permeable, etc.]
Y10T 428/1216	. . . . .	Continuous interengaged phases of plural metals, or oriented fiber containing
Y10T 428/12167	. . . . .	Nonmetal containing
Y10T 428/12174	. . . . .	Mo or W containing
Y10T 428/12181	. . . . .	Composite powder [e.g., coated, etc.]
Y10T 428/12188	. . . . .	having marginal feature for indexing or weakened portion for severing
Y10T 428/12194	. . . . .	For severing perpendicular to longitudinal dimension
Y10T 428/12201	. . . . .	Width or thickness variation or marginal cuts repeating longitudinally
Y10T 428/12208	. . . . .	Variation in both width and thickness
Y10T 428/12215	. . . . .	Marginal slots [i.e., deeper than wide]
Y10T 428/12222	. . . . .	Shaped configuration for melting [e.g., package, etc.]
Y10T 428/12229	. . . . .	Intermediate article [e.g., blank, etc.]
Y10T 428/12236	. . . . .	Panel having nonrectangular perimeter
Y10T 428/12243	. . . . .	Disk
Y10T 428/1225	. . . . .	Symmetrical
Y10T 428/12257	. . . . .	Only one plane of symmetry
Y10T 428/12264	. . . . .	having outward flange, gripping means or interlocking feature
Y10T 428/12271	. . . . .	having discrete fastener, marginal fastening, taper, or end structure
Y10T 428/12278	. . . . .	Same structure at both ends of plural taper
Y10T 428/12285	. . . . .	Single taper [e.g., ingot, etc.]
Y10T 428/12292	. . . . .	Workpiece with longitudinal passageway or stopweld material [e.g., for tubular stock, etc.]
Y10T 428/12299	. . . . .	Workpiece mimicking finished stock having nonrectangular or noncircular cross section
Y10T 428/12306	. . . . .	Workpiece of parallel, nonfastened components [e.g., fagot, pile, etc.]
Y10T 428/12313	. . . . .	Arranged to avoid lateral displacement
Y10T 428/12319	. . . . .	Composite
Y10T 428/12326	. . . . .	with provision for limited relative movement between components
Y10T 428/12333	. . . . .	Helical or with helical component
Y10T 428/1234	. . . . .	Honeycomb, or with grain orientation or elongated elements in defined angular relationship in respective components [e.g., parallel, inter- secting, etc.]
Y10T 428/12347	. . . . .	Plural layers discontinuously bonded [e.g., spot-weld, mechanical fastener, etc.]

- Y10T 428/12354 . . Nonplanar, uniform-thickness material having symmetrical channel shape or reverse fold [e.g., making acute angle, etc.]
- Y10T 428/12361 . . having aperture or cut
- Y10T 428/12368 . . . Struck-out portion type
- Y10T 428/12375 . . having member which crosses the plane of another member [e.g., T or X cross section, etc.]
- Y10T 428/12382 . . Defined configuration of both thickness and nonthickness surface or angle therebetween [e.g., rounded corners, etc.]
- Y10T 428/12389 . . having variation in thickness
- Y10T 428/12396 . . . Discontinuous surface component
- Y10T 428/12403 . . . Longitudinally smooth and symmetrical
- Y10T 428/1241 . . Nonplanar uniform thickness or nonlinear uniform diameter [e.g., L-shape]
- Y10T 428/12417 . . . Intersecting corrugating or dimples not in a single line [e.g., waffle form, etc.]
- Y10T 428/12424 . . Mass of only fibers
- Y10T 428/12431 . . Foil or filament smaller than 6 mils
- Y10T 428/12438 . . . Composite
- Y10T 428/12444 . . Embodying fibers interengaged or between layers [e.g., paper, etc.]
- Y10T 428/12451 . . Macroscopically anomalous interface between layers
- Y10T 428/12458 . . having composition, density, or hardness gradient
- Y10T 428/12465 . . having magnetic properties, or preformed fiber orientation coordinate with shape
- Y10T 428/12472 . . Microscopic interfacial wave or roughness
- Y10T 428/12479 . . Porous [e.g., foamed, spongy, cracked, etc.]
- Y10T 428/12486 . . Laterally noncoextensive components [e.g., embedded, etc.]
- Y10T 428/12493 . . Composite; i.e., plural, adjacent, spatially distinct metal components [e.g., layers, joint, etc.]
- Y10T 428/125 . . . Deflectable by temperature change [e.g., thermostat element]
- Y10T 428/12507 More than two components
- Y10T 428/12514 One component Cu-based
- Y10T 428/12521 Both components Fe-based with more than 10% Ni
- Y10T 428/12528 . . . Semiconductor component
- Y10T 428/12535 . . . with additional, spatially distinct nonmetal component
- Y10T 428/12542 More than one such component
- Y10T 428/12549 Adjacent to each other
- Y10T 428/12556 Organic component
- Y10T 428/12562 Elastomer
- Y10T 428/12569 Synthetic resin
- Y10T 428/12576 Boride, carbide or nitride component
- Y10T 428/12583 Component contains compound of adjacent metal
- Y10T 428/1259 Oxide

Y10T 428/12597	. . . .	Noncrystalline silica or noncrystalline plural-oxide component [e.g., glass, etc.]
Y10T 428/12604	. . . .	Film [e.g., glaze, etc.]
Y10T 428/12611	. . . .	Oxide-containing component
Y10T 428/12618	. . . .	Plural oxides
Y10T 428/12625	. . . .	Free carbon containing component
Y10T 428/12632	. . .	Four or more distinct components with alternate recurrence of each type component
Y10T 428/12639	. . .	Adjacent, identical composition, components
Y10T 428/12646	. . . .	Group VIII or IB metal-base
Y10T 428/12653	. . . . .	Fe, containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/1266	. . .	O, S, or organic compound in metal component
Y10T 428/12667	. . . .	Oxide of transition metal or Al
Y10T 428/12674	. . .	Ge- or Si-base component
Y10T 428/12681	. . .	Ga-, In-, Tl- or Group VA metal-base component
Y10T 428/12687	. . .	Pb- and Sn-base components: alternative to or next to each other
Y10T 428/12694	. . . .	and next to Cu- or Fe-base component
Y10T 428/12701	. . .	Pb-base component
Y10T 428/12708	. . .	Sn-base component
Y10T 428/12715	. . . .	Next to Group IB metal-base component
Y10T 428/12722	. . . .	Next to Group VIII metal-base component
Y10T 428/12729	. . .	Group IIA metal-base component
Y10T 428/12736	. . .	Al-base component
Y10T 428/12743	. . . .	Next to refractory [Group IVB, VB, or VIB] metal-base component
Y10T 428/1275	. . . .	Next to Group VIII or IB metal-base component
Y10T 428/12757	. . . . .	Fe
Y10T 428/12764	. . . .	Next to Al-base component
Y10T 428/12771	. . .	Transition metal-base component
Y10T 428/12778	. . . .	Alternative base metals from diverse categories
Y10T 428/12785	. . . .	Group IIB metal-base component
Y10T 428/12792	. . . . .	Zn-base component
Y10T 428/12799	. . . . .	Next to Fe-base component [e.g., galvanized]
Y10T 428/12806	. . . .	Refractory [Group IVB, VB, or VIB] metal-base component
Y10T 428/12812	. . . .	Diverse refractory group metal-base components: alternative to or next to each other
Y10T 428/12819	. . . . .	Group VB metal-base component
Y10T 428/12826	. . . . .	Group VIB metal-base component
Y10T 428/12833	. . . . .	Alternative to or next to each other
Y10T 428/1284	. . . . .	W-base component
Y10T 428/12847	. . . . .	Cr-base component
Y10T 428/12854	. . . . .	Next to Co-, Fe-, or Ni-base component

Y10T 428/12861	. . . .	Group VIII or IB metal-base component
Y10T 428/12868	. . . . .	Group IB metal-base component alternative to platinum group metal-base component [e.g., precious metal, etc.]
Y10T 428/12875	. . . . .	Platinum group metal-base component
Y10T 428/12882	. . . . .	Cu-base component alternative to Ag-, Au-, or Ni-base component
Y10T 428/12889	. . . . .	Au-base component
Y10T 428/12896	. . . . .	Ag-base component
Y10T 428/12903	. . . . .	Cu-base component
Y10T 428/1291	. . . . .	Next to Co-, Cu-, or Ni-base component
Y10T 428/12917	. . . . .	Next to Fe-base component
Y10T 428/12924	. . . . .	Fe-base has 0.01-1.7% carbon [i.e., steel]
Y10T 428/12931	. . . . .	Co-, Fe-, or Ni-base components, alternative to each other
Y10T 428/12937	. . . . .	Co- or Ni-base component next to Fe-base component
Y10T 428/12944	. . . . .	Ni-base component
Y10T 428/12951	. . . . .	Fe-base component
Y10T 428/12958	. . . . .	Next to Fe-base component
Y10T 428/12965	. . . . .	Both containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/12972	. . . . .	Containing 0.01-1.7% carbon [i.e., steel]
Y10T 428/12979	. . . . .	Containing more than 10% nonferrous elements [e.g., high alloy, stainless]
Y10T 428/12986	. . .	Adjacent functionally defined components
Y10T 428/12993	. .	Surface feature [e.g., rough, mirror]
Y10T 428/13	. .	Hollow or container type article [e.g., tube, vase, etc.]
Y10T 428/1303	. .	Paper containing [e.g., paperboard, cardboard, fiberboard, etc.]
Y10T 428/1307	. . .	Bag or tubular film [e.g., pouch, flexible food casing, envelope, etc.]
Y10T 428/131	. .	Glass, ceramic, or sintered, fused, fired, or calcined metal oxide or metal carbide containing [e.g., porcelain, brick, cement, etc.]
Y10T 428/1314	. . .	Contains fabric, fiber particle, or filament made of glass, ceramic, or sintered, fused, fired, or calcined metal oxide, or metal carbide or other inorganic compound [e.g., fiber glass, mineral fiber, sand, etc.]
Y10T 428/1317	. . .	Multilayer [continuous layer]
Y10T 428/1321	. . . .	Polymer or resin containing [i.e., natural or synthetic]
Y10T 428/1324	. .	Flexible food casing [e.g., sausage type, etc.]
Y10T 428/1328	. .	Shrinkable or shrunk [e.g., due to heat, solvent, volatile agent, restraint removal, etc.]
Y10T 428/1331	. . .	Single layer [continuous layer]
Y10T 428/1334	. .	Nonself-supporting tubular film or bag [e.g., pouch, envelope, packet, etc.]
Y10T 428/1338	. . .	Elemental metal containing
Y10T 428/1341	. . .	Contains vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit
Y10T 428/1345	. . .	Single layer [continuous layer]

- Y10T 428/1348 . . Cellular material derived from plant or animal source [e.g., wood, cotton, wool, leather, etc.]
- Y10T 428/1352 . . Polymer or resin containing [i.e., natural or synthetic]
- Y10T 428/1355 . . . Elemental metal containing [e.g., substrate, foil, film, coating, etc.]
- Y10T 428/1359 Three or more layers [continuous layer]
- Y10T 428/1362 . . . Textile, fabric, cloth, or pile containing [e.g., web, net, woven, knitted, mesh, nonwoven, matted, etc.]
- Y10T 428/1366 Textile, fabric, cloth, or pile is sandwiched between two distinct layers of material unlike the textile, fabric, cloth, or pile layer
- Y10T 428/1369 . . . Fiber or fibers wound around each other or into a self-sustaining shape [e.g., yarn, braid, fibers shaped around a core, etc.]
- Y10T 428/1372 . . . Randomly noninterengaged or randomly contacting fibers, filaments, particles, or flakes
- Y10T 428/1376 . . . Foam or porous material containing
- Y10T 428/1379 . . . Contains vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit
- Y10T 428/1383 Vapor or gas barrier, polymer derived from vinyl chloride or vinylidene chloride, or polymer containing a vinyl alcohol unit is sandwiched between layers [continuous layer]
- Y10T 428/1386 . . . Natural or synthetic rubber or rubber-like compound containing
- Y10T 428/139 . . . Open-ended, self-supporting conduit, cylinder, or tube-type article
- Y10T 428/1393 Multilayer [continuous layer]
- Y10T 428/1397 . . . Single layer [continuous layer]
- Y10T 428/14 . . Layer or component removable to expose adhesive
- Y10T 428/1405 . . Capsule or particulate matter containing [e.g., sphere, flake, microballoon, etc.]
- Y10T 428/141 . . Bituminous
- Y10T 428/1414 . . Ceramic, glass, glasslike, vitreous
- Y10T 428/1419 . . Wax containing
- Y10T 428/1424 . . Halogen containing compound
- Y10T 428/1429 . . . Fluorine
- Y10T 428/1433 . . . Coloring agent containing
- Y10T 428/1438 . . Metal containing
- Y10T 428/1443 . . . Aluminum
- Y10T 428/1448 . . . Coloring agent containing
- Y10T 428/1452 . . Polymer derived only from ethylenically unsaturated monomer
- Y10T 428/1457 . . . Silicon
- Y10T 428/1462 . . Polymer derived from material having at least one acrylic or alkacrylic group or the nitrile or amide derivative thereof [e.g., acrylamide, acrylate ester, etc.]
- Y10T 428/1467 . . Coloring agent
- Y10T 428/1471 . . Protective layer
- Y10T 428/1476 . . Release layer
- Y10T 428/1481 . . Dissimilar adhesives

- Y10T 428/1486 . . Ornamental, decorative, pattern, or indicia
- Y10T 428/149 . . Sectional layer removable
- Y10T 428/1495 . . . Adhesive is on removable layer
- Y10T 428/15 . Sheet, web, or layer weakened to permit separation through thickness
- Y10T 428/16 . Two dimensionally sectional layer
- Y10T 428/161 . . with frame, casing, or perimeter structure
- Y10T 428/162 . . Transparent or translucent layer or section
- Y10T 428/163 . . Next to unitary web or sheet of equal or greater extent
- Y10T 428/164 . . . Continuous two dimensionally sectional layer
- Y10T 428/166 Glass, ceramic, or metal sections [e.g., floor or wall tile, etc.]
- Y10T 428/167 Cellulosic sections [e.g., parquet floor, etc.]
- Y10T 428/168 . . . Nonrectangular
- Y10T 428/169 . . Sections connected flexibly with external fastener
- Y10T 428/17 . Three or more coplanar interfitted sections with securing means
- Y10T 428/18 . Longitudinally sectional layer of three or more sections
- Y10T 428/183 . . Next to unitary sheet of equal or greater extent
- Y10T 428/187 . . . Continuous sectional layer
- Y10T 428/19 . Sheets or webs edge spliced or joined
- Y10T 428/192 . . Sheets or webs coplanar
- Y10T 428/193 . . . Double faced corrugated sheets or webs connected
- Y10T 428/195 . . . Beveled, stepped, or skived in thickness
- Y10T 428/197 . . . with noncoplanar reinforcement
- Y10T 428/198 Pile or nap surface sheets connected
- Y10T 428/20 . Patched hole or depression
- Y10T 428/21 . Circular sheet or circular blank
- Y10T 428/211 . . Gear
- Y10T 428/213 . . Frictional
- Y10T 428/214 . . End closure
- Y10T 428/215 . . Seal, gasket, or packing
- Y10T 428/216 . . Ornamental, decorative, pattern, or indicia
- Y10T 428/218 . . Aperture containing
- Y10T 428/219 . . Edge structure
- Y10T 428/22 . Nonparticulate element embedded or inlaid in substrate and visible
- Y10T 428/23 . Sheet including cover or casing
- Y10T 428/231 . . Filled with gas other than air; or under vacuum
- Y10T 428/232 . . Encased layer derived from inorganic settable ingredient
- Y10T 428/233 . . Foamed or expanded material encased
- Y10T 428/234 . . including elements cooperating to form cells
- Y10T 428/236 . . . Honeycomb type cells extend perpendicularly to nonthickness layer
- Y10T 428/237 . . Noninterengaged fibered material encased [e.g., mat, batt, etc.]

Y10T 428/238	. . . Metal cover or casing
Y10T 428/239	. . Complete cover or casing
Y10T 428/23907	. Pile or nap type surface or component
Y10T 428/23914	. . Interlaminar
Y10T 428/23921	. . With particles
Y10T 428/23929	. . Edge feature or configured or discontinuous surface
Y10T 428/23936	. . . Differential pile length or surface
Y10T 428/23943	. . Flock surface
Y10T 428/2395	. . Nap type surface
Y10T 428/23957	. . Particular shape or structure of pile
Y10T 428/23964	. . . U-, V-, or W-shaped or continuous strand, filamentary material
Y10T 428/23971	. . . . Continuous strand with adhesive bond to backing
Y10T 428/23979	. . Particular backing structure or composition
Y10T 428/23986	. . With coating, impregnation, or bond
Y10T 428/23993	. . Composition of pile or adhesive
Y10T 428/24	. Structurally defined web or sheet [e.g., overall dimension, etc.]
Y10T 428/24008	. . including fastener for attaching to external surface
Y10T 428/24017	. . . Hook or barb
Y10T 428/24025	. . Superposed movable attached layers or components
Y10T 428/24033	. . including stitching and discrete fastener[s], coating or bond
Y10T 428/24041	. . . Discontinuous or differential coating, impregnation, or bond
Y10T 428/2405	. . . . Coating, impregnation, or bond in stitching zone only
Y10T 428/24058	. . including grain, strips, or filamentary elements in respective layers or components in angular relation
Y10T 428/24066	. . . Wood grain
Y10T 428/24074	. . . Strand or strand-portions
Y10T 428/24083	. . . . Nonlinear strands or strand-portions
Y10T 428/24091	. . . . with additional layer[s]
Y10T 428/24099	. . . . . On each side of strands or strand-portions
Y10T 428/24107	. . . . . including mechanically interengaged strands, strand-portions or strand-like strips
Y10T 428/24116	. . . . Oblique to direction of web
Y10T 428/24124	. . . Fibers
Y10T 428/24132	. . including grain, strips, or filamentary elements in different layers or components parallel
Y10T 428/2414	. . including fringe
Y10T 428/24149	. . Honeycomb-like
Y10T 428/24157	. . . Filled honeycomb cells [e.g., solid substance in cavities, etc.]
Y10T 428/24165	. . . Hexagonally shaped cavities
Y10T 428/24174	. . including sheet or component perpendicular to plane of web or sheet
Y10T 428/24182	. . . Inward from edge of web or sheet

Y10T 428/2419	. .	Fold at edge
Y10T 428/24198	. . .	Channel-shaped edge component [e.g., binding, etc.]
Y10T 428/24207	. . .	with strand[s] or strand-portion[s] between layers [e.g., upholstery trim, etc.]
Y10T 428/24215	. . .	Acute or reverse fold of exterior component
Y10T 428/24223	. . . .	Embedded in body of web
Y10T 428/24231	. . . .	At opposed marginal edges
Y10T 428/2424	. . . . .	Annular cover
Y10T 428/24248	. . . . .	One piece
Y10T 428/24256	. . . . .	Abutted or lapped seam
Y10T 428/24264	. . .	Particular fold structure [e.g., beveled, etc.]
Y10T 428/24273	. .	including aperture
Y10T 428/24281	. . .	Struck out portion type
Y10T 428/24289	. . . .	Embedded or interlocked
Y10T 428/24298	. . .	Noncircular aperture [e.g., slit, diamond, rectangular, etc.]
Y10T 428/24306	. . . .	Diamond or hexagonal
Y10T 428/24314	. . . .	Slit or elongated
Y10T 428/24322	. . .	Composite web or sheet
Y10T 428/24331	. . . .	including nonapertured component
Y10T 428/24339	. . . . .	Keyed
Y10T 428/24347	. . . . .	From both sides
Y10T 428/24355	. .	Continuous and nonuniform or irregular surface on layer or component [e.g., roofing, etc.]
Y10T 428/24364	. . .	with transparent or protective coating
Y10T 428/24372	. . .	Particulate matter
Y10T 428/2438	. . . .	Coated
Y10T 428/24388	. . . . .	Silicon containing coating
Y10T 428/24397	. . . .	Carbohydrate
Y10T 428/24405	. . . .	Polymer or resin [e.g., natural or synthetic rubber, etc.]
Y10T 428/24413	. . . .	Metal or metal compound
Y10T 428/24421	. . . .	Silicon containing
Y10T 428/2443	. . . . .	Sand, clay, or crushed rock or slate
Y10T 428/24438	. . .	Artificial wood or leather grain surface
Y10T 428/24446	. . .	Wrinkled, creased, crinkled or creped
Y10T 428/24455	. . . .	Paper
Y10T 428/24463	. . . . .	Plural paper components
Y10T 428/24471	. . .	Crackled, crazed or slit
Y10T 428/24479	. .	including variation in thickness
Y10T 428/24488	. . .	Differential nonuniformity at margin
Y10T 428/24496	. . .	Foamed or cellular component

Y10T 428/24504	. . . .	Component comprises a polymer [e.g., rubber, etc.]
Y10T 428/24512	. . . . .	Polyurethane
Y10T 428/24521	. . .	with component conforming to contour of nonplanar surface
Y10T 428/24529	. . . .	and conforming component on an opposite nonplanar surface
Y10T 428/24537	. . . .	Parallel ribs and/or grooves
Y10T 428/24545	. . . .	Containing metal or metal compound
Y10T 428/24554	. . . .	including cellulosic or natural rubber component
Y10T 428/24562	. . .	Interlaminar spaces
Y10T 428/2457	. . .	Parallel ribs and/or grooves
Y10T 428/24579	. . . .	with particulate matter
Y10T 428/24587	. . . .	Oblique to longitudinal axis of web or sheet
Y10T 428/24595	. . .	and varying density
Y10T 428/24603	. . . .	Fiber containing component
Y10T 428/24612	. . .	Composite web or sheet
Y10T 428/2462	. . . .	with partial filling of valleys on outer surface
Y10T 428/24628	. .	Nonplanar uniform thickness material
Y10T 428/24636	. . .	Embodying mechanically interengaged strand[s], strand-portion[s] or strand-like strip[s] [e.g., weave, knit, etc.]
Y10T 428/24645	. . . .	with folds in parallel planes
Y10T 428/24653	. . .	Differential nonplanarity at margin
Y10T 428/24661	. . .	Forming, or cooperating to form cells
Y10T 428/24669	. . .	Aligned or parallel nonplanarities
Y10T 428/24678	. . . .	Waffle-form
Y10T 428/24686	. . . .	Pleats or otherwise parallel adjacent folds
Y10T 428/24694	. . . .	Parallel corrugations
Y10T 428/24702	. . . . .	with locally deformed crests or intersecting series of corrugations
Y10T 428/24711	. . . . .	Plural corrugated components
Y10T 428/24719	. . . . .	with corrugations of respective components intersecting in plane projection
Y10T 428/24727	. . . . .	with planar component
Y10T 428/24736	. . .	Ornamental design or indicia
Y10T 428/24744	. .	Longitudinal or transverse tubular cavity or cell
Y10T 428/24752	. .	Laterally noncoextensive components
Y10T 428/2476	. . .	Fabric, cloth or textile component
Y10T 428/24769	. . .	Cellulosic
Y10T 428/24777	. .	Edge feature
Y10T 428/24785	. . .	including layer embodying mechanically interengaged strands, strand portions or strand-like strips [e.g., weave, knit, etc.]
Y10T 428/24793	. . .	Comprising discontinuous or differential impregnation or bond
Y10T 428/24802	. .	Discontinuous or differential coating, impregnation or bond [e.g., artwork, printing, retouched photograph, etc.]

- Y10T 428/2481 . . . including layer of mechanically interengaged strands, strand-portions or strand-like strips
- Y10T 428/24818 Knitted, with particular or differential bond sites or intersections
- Y10T 428/24826 . . . Spot bonds connect components
- Y10T 428/24835 . . . including developable image or soluble portion in coating or impregnation [e.g., safety paper, etc.]
- Y10T 428/24843 . . . with heat sealable or heat releasable adhesive layer
- Y10T 428/24851 . . . Intermediate layer is discontinuous or differential
- Y10T 428/2486 with outer strippable or release layer
- Y10T 428/24868 Translucent outer layer
- Y10T 428/24876 Intermediate layer contains particulate material [e.g., pigment, etc.]
- Y10T 428/24884 Translucent layer comprises natural oil, wax, resin, gum, glue, gelatin
- Y10T 428/24893 . . . including particulate material
- Y10T 428/24901 including coloring matter
- Y10T 428/24909 Free metal or mineral containing
- Y10T 428/24917 . . . including metal layer
- Y10T 428/24926 . . . including ceramic, glass, porcelain or quartz layer
- Y10T 428/24934 . . . including paper layer
- Y10T 428/24942 . . including components having same physical characteristic in differing degree
- Y10T 428/2495 . . . Thickness [relative or absolute]
- Y10T 428/24959 of adhesive layers
- Y10T 428/24967 Absolute thicknesses specified
- Y10T 428/24975 No layer or component greater than 5 mils thick
- Y10T 428/24983 . . . Hardness
- Y10T 428/24992 . . . Density or compression of components
- Y10T 428/249921 . Web or sheet containing structurally defined element or component
- Y10T 428/249922 . . Embodying intertwined or helical component[s]
- Y10T 428/249923 . . Including interlaminar mechanical fastener
- Y10T 428/249924 . . Noninterengaged fiber-containing paper-free web or sheet which is not of specified porosity
- Y10T 428/249925 . . . Fiber-containing wood product [e.g., hardboard, lumber, or wood board, etc.]
- Y10T 428/249926 . . . Including paper layer
- Y10T 428/249927 . . . Fiber embedded in a metal matrix
- Y10T 428/249928 . . . Fiber embedded in a ceramic, glass, or carbon matrix
- Y10T 428/249929 Fibers are aligned substantially parallel
- Y10T 428/24993 Fiber is precoated
- Y10T 428/249931 Free metal or alloy fiber
- Y10T 428/249932 . . . Fiber embedded in a layer derived from a water-settable material [e.g., cement, gypsum, etc.]

Y10T 428/249933	.	.	.	Fiber embedded in or on the surface of a natural or synthetic rubber matrix
Y10T 428/249934	.	.	.	Fibers are aligned substantially parallel
Y10T 428/249935	.	.	.	Fiber is nonlinear [e.g., crimped, sinusoidal, etc.]
Y10T 428/249936	.	.	.	Fiber is precoated
Y10T 428/249937	.	.	.	Fiber is precoated
Y10T 428/249938	.	.	.	Composite or conjugate fiber [e.g., fiber contains more than one chemically different material in monofilament or multifilament form, etc.]
Y10T 428/249939	.	.	.	Two or more layers
Y10T 428/24994	.	.	.	Fiber embedded in or on the surface of a polymeric matrix
Y10T 428/249941	.	.	.	Fiber is on the surface of a polymeric matrix having no embedded portion
Y10T 428/249942	.	.	.	Fibers are aligned substantially parallel
Y10T 428/249943	.	.	.	Fiber is nonlinear [e.g., crimped, sinusoidal, etc.]
Y10T 428/249944	.	.	.	Fiber is precoated
Y10T 428/249945	.	.	.	Carbon or carbonaceous fiber
Y10T 428/249946	.	.	.	Glass fiber
Y10T 428/249947	.	.	.	Polymeric fiber
Y10T 428/249948	.	.	.	Fiber is precoated
Y10T 428/249949	.	.	.	Two or more chemically different fibers
Y10T 428/24995	.	.	.	Two or more layers
Y10T 428/249951	.	.	.	Including a free metal or alloy constituent
Y10T 428/249952	.	.	.	At least one thermosetting synthetic polymeric material layer
Y10T 428/249953	.	.	.	Composite having voids in a component [e.g., porous, cellular, etc.]
Y10T 428/249954	.	.	.	With chemically effective material or specified gas other than air, N, or carbon dioxide in void-containing component
Y10T 428/249955	.	.	.	Void-containing component partially impregnated with adjacent component
Y10T 428/249956	.	.	.	Void-containing component is inorganic
Y10T 428/249957	.	.	.	Inorganic impregnant
Y10T 428/249958	.	.	.	Void-containing component is synthetic resin or natural rubbers
Y10T 428/249959	.	.	.	Void-containing component is wood or paper
Y10T 428/24996	.	.	.	With internal element bridging layers, nonplanar interface between layers, or intermediate layer of commingled adjacent foam layers
Y10T 428/249961	.	.	.	With gradual property change within a component
Y10T 428/249962	.	.	.	Void-containing component has a continuous matrix of fibers only [e.g., porous paper, etc.]
Y10T 428/249963	.	.	.	And a force disintegratable component [e.g., stencil sheet, etc.]
Y10T 428/249964	.	.	.	Fibers of defined composition
Y10T 428/249965	.	.	.	Cellulosic
Y10T 428/249966	.	.	.	Plural cellulosic components

- Y10T 428/249967 . . . Inorganic matrix in void-containing component
- Y10T 428/249968 Of hydraulic-setting material
- Y10T 428/249969 Of silicon-containing material [e.g., glass, etc.]
- Y10T 428/24997 Of metal-containing material
- Y10T 428/249971 . . . Preformed hollow element-containing
- Y10T 428/249972 Resin or rubber element
- Y10T 428/249973 Mineral element
- Y10T 428/249974 Metal- or silicon-containing element
- Y10T 428/249975 . . . Void shape specified [e.g., crushed, flat, round, etc.]
- Y10T 428/249976 . . . Voids specified as closed
- Y10T 428/249977 Specified thickness of void-containing component [absolute or relative], numerical cell dimension or density
- Y10T 428/249978 . . . Voids specified as micro
- Y10T 428/249979 Specified thickness of void-containing component [absolute or relative] or numerical cell dimension
- Y10T 428/24998 Composite has more than two layers
- Y10T 428/249981 . . . Plural void-containing components
- Y10T 428/249982 . . . With component specified as adhesive or bonding agent
- Y10T 428/249983 As outermost component
- Y10T 428/249984 Adhesive or bonding component contains voids
- Y10T 428/249985 Composition of adhesive or bonding component specified
- Y10T 428/249986 . . . Void-containing component contains also a solid fiber or solid particle
- Y10T 428/249987 . . . With nonvoid component of specified composition
- Y10T 428/249988 Of about the same composition as, and adjacent to, the void-containing component
- Y10T 428/249989 Integrally formed skin
- Y10T 428/24999 Inorganic
- Y10T 428/249991 Synthetic resin or natural rubbers
- Y10T 428/249992 Linear or thermoplastic
- Y10T 428/249993 Hydrocarbon polymer
- Y10T 428/249994 . . Composite having a component wherein a constituent is liquid or is contained within preformed walls [e.g., impregnant-filled, previously void containing component, etc.]
- Y10T 428/249995 . . . Constituent is in liquid form
- Y10T 428/249996 Ink in pores
- Y10T 428/249997 Encapsulated liquid
- Y10T 428/249998 . . . Indefinite plurality of similar impregnated thin sheets [e.g., "decorative laminate" type, etc.]
- Y10T 428/249999 . . . Differentially filled foam, filled plural layers, or filled layer with coat of filling material
- Y10T 428/25 . Web or sheet containing structurally defined element or component and including a second component containing structurally defined particles

- Y10T 428/251 . . Mica
- Y10T 428/252 . . Glass or ceramic [i.e., fired or glazed clay, cement, etc.] [porcelain, quartz, etc.]
- Y10T 428/253 . . Cellulosic [e.g., wood, paper, cork, rayon, etc.]
- Y10T 428/254 . . Polymeric or resinous material
- Y10T 428/256 . . Heavy metal or aluminum or compound thereof
- Y10T 428/257 . . . Iron oxide or aluminum oxide
- Y10T 428/258 . . Alkali metal or alkaline earth metal or compound thereof
- Y10T 428/259 . . Silicic material
- Y10T 428/26 . . Web or sheet containing structurally defined element or component, the element or component having a specified physical dimension
- Y10T 428/261 . . In terms of molecular thickness or light wave length
- Y10T 428/263 . . Coating layer not in excess of 5 mils thick or equivalent
- Y10T 428/264 . . . Up to 3 mils
- Y10T 428/265 1 mil or less
- Y10T 428/266 . . of base or substrate
- Y10T 428/268 . . Monolayer with structurally defined element
- Y10T 428/269 . . including synthetic resin or polymer layer or component
- Y10T 428/27 . . Web or sheet containing structurally defined element or component, the element or component having a specified weight per unit area [e.g., gms/sq cm, lbs/sq ft, etc.]
- Y10T 428/273 . . of coating
- Y10T 428/277 . . . Cellulosic substrate
- Y10T 428/28 . . Web or sheet containing structurally defined element or component and having an adhesive outermost layer
- Y10T 428/2804 . . Next to metal
- Y10T 428/2809 . . including irradiated or wave energy treated component
- Y10T 428/2813 . . Heat or solvent activated or sealable
- Y10T 428/2817 . . . Heat sealable
- Y10T 428/2822 Wax containing
- Y10T 428/2826 Synthetic resin or polymer
- Y10T 428/283 . . . Water activated
- Y10T 428/2835 . . including moisture or waterproof component
- Y10T 428/2839 . . with release or antistick coating
- Y10T 428/2843 . . including a primer layer
- Y10T 428/2848 . . Three or more layers
- Y10T 428/2852 . . Adhesive compositions
- Y10T 428/2857 . . . including metal or compound thereof or natural rubber
- Y10T 428/2861 . . . having readily strippable combined with readily readhearable properties [e.g., stick-ons, etc.]
- Y10T 428/2865 . . . including monomer or polymer of carbohydrate [e.g., starch, dextrin, etc.] Or protein [e.g., casein, animal protein, etc.] Or derivative thereof

Y10T 428/287	. . .	including epoxy group or epoxy polymer
Y10T 428/2874	. . .	including aldehyde or ketone condensation polymer [e.g., urea formaldehyde polymer, melamine formaldehyde polymer, etc.]
Y10T 428/2878	. . .	including addition polymer from unsaturated monomer
Y10T 428/2883	. . . .	including addition polymer of diene monomer [e.g., SBR, SIS, etc.]
Y10T 428/2887	. . . .	including nitrogen containing polymer [e.g., polyacrylonitrile, polymethacrylonitrile, etc.]
Y10T 428/2891	. . . .	including addition polymer from alpha-beta unsaturated carboxylic acid [e.g., acrylic acid, methacrylic acid, etc.] Or derivative thereof
Y10T 428/2896	. . .	including nitrogen containing condensation polymer [e.g., polyurethane, polyisocyanate, etc.]
Y10T 428/29	. .	Coated or structurally defined flake, particle, cell, strand, strand portion, rod, filament, macroscopic fiber or mass thereof
Y10T 428/2902	. .	Channel shape
Y10T 428/2904	. .	Staple length fiber
Y10T 428/2905	. . .	Plural and with bonded intersections only
Y10T 428/2907	. . .	with coating or impregnation
Y10T 428/2909	. . .	Nonlinear [e.g., crimped, coiled, etc.]
Y10T 428/2911	. .	Mica flake
Y10T 428/2913	. .	Rod, strand, filament or fiber
Y10T 428/2915	. . .	including textile, cloth or fabric
Y10T 428/2916	. . .	including boron or compound thereof [not as steel]
Y10T 428/2918	. . .	including free carbon or carbide or therewith [not as steel]
Y10T 428/292	. . . .	In coating or impregnation
Y10T 428/2922	. . .	Nonlinear [e.g., crimped, coiled, etc.]
Y10T 428/2924	. . . .	Composite
Y10T 428/2925	. . . .	Helical or coiled
Y10T 428/2927	. . .	including structurally defined particulate matter
Y10T 428/2929	. . .	Bicomponent, conjugate, composite or collateral fibers or filaments [i.e., coextruded sheath-core or side-by-side type]
Y10T 428/2931	. . . .	Fibers or filaments nonconcentric [e.g., side-by-side or eccentric, etc.]
Y10T 428/2933	. . .	Coated or with bond, impregnation or core
Y10T 428/2935	. . . .	Discontinuous or tubular or cellular core
Y10T 428/2936	. . . .	Wound or wrapped core or coating [i.e., spiral or helical]
Y10T 428/2938	. . . .	Coating on discrete and individual rods, strands or filaments
Y10T 428/294	. . . .	including metal or compound thereof [excluding glass, ceramic and asbestos]
Y10T 428/2942	. . . . .	Plural coatings
Y10T 428/2944	. . . . .	Free metal in coating
Y10T 428/2945	. . . . .	Natural rubber in coating
Y10T 428/2947	. . . . .	Synthetic resin or polymer in plural coatings, each of different type

Y10T 428/2949	. . . . .	Glass, ceramic or metal oxide in coating
Y10T 428/2951	. . . . .	Metal with weld modifying or stabilizing coating [e.g., flux, slag, producer, etc.]
Y10T 428/2953	. . . . .	Titanium compound in coating
Y10T 428/2955	. . . . .	Silicic material in coating
Y10T 428/2956	. . . . .	Glass or silicic fiber or filament with metal coating
Y10T 428/2958	. . . . .	Metal or metal compound in coating
Y10T 428/296	. . . . .	Rubber, cellulosic or silicic material in coating
Y10T 428/2962	. . . . .	Silane, silicone or siloxane in coating
Y10T 428/2964	. . . . .	Artificial fiber or filament
Y10T 428/2965	. . . . .	Cellulosic
Y10T 428/2967	. . . . .	Synthetic resin or polymer
Y10T 428/2969	. . . . .	Polyamide, polyimide or polyester
Y10T 428/2971	. . . . .	Impregnation
Y10T 428/2973	. . . . .	Particular cross section
Y10T 428/2975	. . . . .	Tubular or cellular
Y10T 428/2976	. . . . .	Longitudinally varying
Y10T 428/2978	. . . . .	Surface characteristic
Y10T 428/298	. . . . .	Physical dimension
Y10T 428/2982	. . . . .	Particulate matter [e.g., sphere, flake, etc.]
Y10T 428/2984	. . . . .	Microcapsule with fluid core [includes liposome]
Y10T 428/2985	. . . . .	Solid-walled microcapsule from synthetic polymer
Y10T 428/2987	. . . . .	Addition polymer from unsaturated monomers only
Y10T 428/2989	. . . . .	Microcapsule with solid core [includes liposome]
Y10T 428/2991	. . . . .	Coated
Y10T 428/2993	. . . . .	Silicic or refractory material containing [e.g., tungsten oxide, glass, cement, etc.]
Y10T 428/2995	. . . . .	Silane, siloxane or silicone coating
Y10T 428/2996	. . . . .	Glass particles or spheres
Y10T 428/2998	. . . . .	including synthetic resin or polymer
Y10T 428/30	. . . . .	Self-sustaining carbon mass or layer with impregnant or other layer
Y10T 428/31	. . . . .	Surface property or characteristic of web, sheet or block
Y10T 428/315	. . . . .	Surface modified glass [e.g., tempered, strengthened, etc.]
Y10T 428/31504	. . . . .	Composite [nonstructural laminate]
Y10T 428/31507	. . . . .	Of polycarbonate
Y10T 428/31511	. . . . .	Of epoxy ether
Y10T 428/31515	. . . . .	As intermediate layer
Y10T 428/31518	. . . . .	Next to glass or quartz
Y10T 428/31522	. . . . .	Next to metal
Y10T 428/31525	. . . . .	Next to glass or quartz

Y10T 428/31529	. . .	Next to metal
Y10T 428/31533	. .	Of polythioether
Y10T 428/31536	. .	Including interfacial reaction product of adjacent layers
Y10T 428/3154	. .	Of fluorinated addition polymer from unsaturated monomers
Y10T 428/31544	. . .	Addition polymer is perhalogenated
Y10T 428/31547	. .	Of polyisocyanurate
Y10T 428/31551	. .	Of polyamidoester [polyurethane, polyisocyanate, polycarbamate, etc.]
Y10T 428/31554	. . .	Next to second layer of polyamidoester
Y10T 428/31558	. . .	Next to animal skin or membrane
Y10T 428/31562	. . .	Next to polyamide [nylon, etc.]
Y10T 428/31565	. . .	Next to polyester [polyethylene terephthalate, etc.]
Y10T 428/31569	. . .	Next to natural rubber
Y10T 428/31573	. . .	Next to addition polymer of ethylenically unsaturated monomer
Y10T 428/31576	. . . .	Ester monomer type [polyvinylacetate, etc.]
Y10T 428/3158	. . . .	Halide monomer type [polyvinyl chloride, etc.]
Y10T 428/31583	. . . .	Nitrile monomer type [polyacrylonitrile, etc.]
Y10T 428/31587	. . . .	Hydrocarbon polymer [polyethylene, polybutadiene, etc.]
Y10T 428/31591	. . .	Next to cellulosic
Y10T 428/31594	. . .	Next to aldehyde or ketone condensation product [phenol-aldehyde, etc.]
Y10T 428/31598	. . .	Next to silicon-containing [silicone, cement, etc.] layer
Y10T 428/31601	. . . .	Quartz or glass
Y10T 428/31605	. . .	Next to free metal
Y10T 428/31609	. . .	Particulate metal or metal compound-containing
Y10T 428/31612	. . . .	As silicone, silane or siloxane
Y10T 428/31616	. . .	Next to polyester [e.g., alkyd]
Y10T 428/3162	. . . .	Cross-linked polyester [e.g., glycerol maleate-styrene, etc.]
Y10T 428/31623	. . .	Next to polyamide or polyimide
Y10T 428/31627	. . .	Next to aldehyde or ketone condensation product
Y10T 428/3163	. . . .	Next to acetal of polymerized unsaturated alcohol [e.g., formal butyral, etc.]
Y10T 428/31634	. . .	Next to cellulosic
Y10T 428/31638	. . . .	Cellulosic ester
Y10T 428/31641	. . .	Next to natural rubber, gum, oil, rosin, wax, bituminous or tarry residue
Y10T 428/31645	. . .	Next to addition polymer from unsaturated monomers
Y10T 428/31649	. . . .	Ester, halide or nitrile of addition polymer
Y10T 428/31652	. .	Of asbestos
Y10T 428/31656	. . .	With metal layer
Y10T 428/31659	. . .	With cellulosic layer
Y10T 428/31663	. . .	As siloxane, silicone or silane

Y10T 428/31667	. . .	Next to addition polymer from unsaturated monomers, or aldehyde or ketone condensation product
Y10T 428/3167	. .	Of cork
Y10T 428/31674	. . .	Including natural oil or gum or rosin [e.g., linoleum, etc.]
Y10T 428/31678	. .	Of metal
Y10T 428/31681	. . .	Next to polyester, polyamide or polyimide [e.g., alkyd, glue, or nylon, etc.]
Y10T 428/31685	. . . .	Natural source polyamide [e.g., casein, gelatin, etc.]
Y10T 428/31688	. . .	Next to aldehyde or ketone condensation product
Y10T 428/31692	. . .	Next to addition polymer from unsaturated monomers
Y10T 428/31696	. . . .	Including polyene monomers [e.g., butadiene, etc.]
Y10T 428/31699	. . . .	Ester, halide or nitrile of addition polymer
Y10T 428/31703	. . .	Next to cellulosic
Y10T 428/31707	. . .	Next to natural rubber
Y10T 428/3171	. . . .	With natural rubber next to second layer of natural rubber
Y10T 428/31714	. . .	Next to natural gum, natural oil, rosin, lac or wax
Y10T 428/31717	. . .	Next to bituminous or tarry residue
Y10T 428/31721	. .	Of polyimide
Y10T 428/31725	. .	Of polyamide
Y10T 428/31728	. . .	Next to second layer of polyamide
Y10T 428/31732	. . . .	At least one layer is nylon type
Y10T 428/31736	. . .	Next to polyester
Y10T 428/31739	. . .	Nylon type
Y10T 428/31743	. . . .	Next to addition polymer from unsaturated monomer[s]
Y10T 428/31746	. . . . .	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/3175	. . .	Next to addition polymer from unsaturated monomer[s]
Y10T 428/31754	. . . .	Natural source-type polyamide
Y10T 428/31757	. . . .	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/31761	. . .	Next to aldehyde or ketone condensation product
Y10T 428/31765	. . .	Inorganic-containing or next to inorganic-containing
Y10T 428/31768	. . .	Natural source-type polyamide [e.g., casein, gelatin, etc.]
Y10T 428/31772	. . . .	Next to cellulosic
Y10T 428/31775	. . . . .	Paper
Y10T 428/31779	. . .	Next to cellulosic
Y10T 428/31783	. . . .	Paper or wood
Y10T 428/31786	. .	Of polyester [e.g., alkyd, etc.]
Y10T 428/3179	. . .	Next to cellulosic
Y10T 428/31794	. . .	Of cross-linked polyester
Y10T 428/31797	. . .	Next to addition polymer from unsaturated monomers
Y10T 428/31801	. .	Of wax or waxy material
Y10T 428/31804	. . .	Next to cellulosic

Y10T 428/31808	. . . .	Cellulosic is paper
Y10T 428/31812	. . . . .	Glassine paper
Y10T 428/31815	. .	Of bituminous or tarry residue
Y10T 428/31819	. . .	Next to cellulosic
Y10T 428/31823	. . . .	Paper
Y10T 428/31826	. .	Of natural rubber
Y10T 428/3183	. . .	Next to second layer of natural rubber
Y10T 428/31833	. . .	Next to aldehyde or ketone condensation product or addition polymer from unsaturated monomers
Y10T 428/31837	. . . .	Including polyene monomers
Y10T 428/31841	. . .	Next to cellulosic
Y10T 428/31844	. .	Of natural gum, rosin, natural oil or lac
Y10T 428/31848	. . .	Next to cellulosic
Y10T 428/31851	. . . .	Natural oil
Y10T 428/31855	. .	Of addition polymer from unsaturated monomers
Y10T 428/31859	. . .	Next to an aldehyde or ketone condensation product
Y10T 428/31862	. . . .	Melamine-aldehyde
Y10T 428/31866	. . . . .	Impregnated or coated cellulosic material
Y10T 428/3187	. . . .	Amide-aldehyde
Y10T 428/31873	. . . . .	Urea or modified urea-aldehyde
Y10T 428/31877	. . . .	Phenol-aldehyde
Y10T 428/3188	. . .	Next to cellulosic
Y10T 428/31884	. . . .	Regenerated or modified cellulose
Y10T 428/31888	. . . . .	Addition polymer of hydrocarbon[s] only
Y10T 428/31891	. . . . .	Where addition polymer is an ester or halide
Y10T 428/31895	. . . .	Paper or wood
Y10T 428/31899	. . . . .	Addition polymer of hydrocarbon[s] only
Y10T 428/31902	. . . . .	Monoethylenically unsaturated
Y10T 428/31906	. . . . .	Ester, halide or nitrile of addition polymer
Y10T 428/31909	. . .	Next to second addition polymer from unsaturated monomers
Y10T 428/31913	. . . .	Monoolefin polymer
Y10T 428/31917	. . . . .	Next to polyene polymer
Y10T 428/3192	. . . . .	Next to vinyl or vinylidene chloride polymer
Y10T 428/31924	. . . .	Including polyene monomers
Y10T 428/31928	. . . .	Ester, halide or nitrile of addition polymer
Y10T 428/31931	. . .	Polyene monomer-containing
Y10T 428/31935	. . .	Ester, halide or nitrile of addition polymer
Y10T 428/31938	. . .	Polymer of monoethylenically unsaturated hydrocarbon
Y10T 428/31942	. .	Of aldehyde or ketone condensation product
Y10T 428/31946	. . .	Next to second aldehyde or ketone condensation product

Y10T 428/31949	. . . Next to cellulosic
Y10T 428/31953	. . . . Modified or regenerated cellulose
Y10T 428/31957	. . . . Wood
Y10T 428/3196	. . . . . Phenoplast
Y10T 428/31964	. . . . Paper
Y10T 428/31967	. . . . . Phenoplast
Y10T 428/31971	. . Of carbohydrate
Y10T 428/31975	. . . Of cellulosic next to another carbohydrate
Y10T 428/31978	. . . . Cellulosic next to another cellulosic
Y10T 428/31982	. . . . . Wood or paper
Y10T 428/31986	. . . . . Regenerated or modified
Y10T 428/31989	. . . Of wood
Y10T 428/31993	. . . Of paper
Y10T 428/31996	. . . . Next to layer of metal salt [e.g., plasterboard, etc.]
Y10T 428/32	. Composite [nonstructural laminate] of inorganic material having metal-compound-containing layer and having defined magnetic layer
Y10T 428/325	. . Magnetic layer next to second metal compound-containing layer
Y10T 428/4935	. Impregnated naturally solid product [e.g., leather, stone, etc.]
Y10T 428/662	. . Wood timber product [e.g., piling, post, veneer, etc.]
Y10T 428/8305	. Miscellaneous [e.g., treated surfaces, etc.]

Former US Class 436 Series

Y10T 436/00	Chemistry: analytical and immunological testing
Y10T 436/10	. Composition for standardization, calibration, simulation, stabilization, preparation or preservation; processes of use in preparation for chemical testing
Y10T 436/100833	. . Simulative of a gaseous composition
Y10T 436/101666	. . Particle count or volume standard or control [e.g., platelet count standards, etc.]
Y10T 436/102499	. . Blood gas standard or control
Y10T 436/103332	. . Bilirubin or uric acid standard or control
Y10T 436/104165	. . Lipid, cholesterol, or triglyceride standard or control
Y10T 436/104998	. . Glucose, ketone, nitrate standard or control
Y10T 436/105831	. . Protein or peptide standard or control [e.g., hemoglobin, etc.]
Y10T 436/106664	. . Blood serum or blood plasma standard or control
Y10T 436/107497	. . Preparation composition [e.g., lysing or precipitation, etc.]
Y10T 436/108331	. . Preservative, buffer, anticoagulant or diluent
Y10T 436/109163	. . Inorganic standards or controls
Y10T 436/11	. Automated chemical analysis
Y10T 436/110833	. . Utilizing a moving indicator strip or tape
Y10T 436/111666	. . Utilizing a centrifuge or compartmented rotor

- Y10T 436/112499 . . with sample on test slide
- Y10T 436/113332 . . with conveyance of sample along a test line in a container or rack
- Y10T 436/114165 . . . with step of insertion or removal from test line
- Y10T 436/114998 . . . with treatment or replacement of aspirator element [e.g., cleaning, etc.]
- Y10T 436/115831 . . Condition or time responsive
- Y10T 436/116664 . . . with automated titrator
- Y10T 436/117497 . . with a continuously flowing sample or carrier stream
- Y10T 436/118339 . . . with formation of a segmented stream
- Y10T 436/119163 . . with aspirator of claimed structure
- Y10T 436/12 . Condition responsive control
- Y10T 436/13 . Tracers or tags
- Y10T 436/14 . Heterocyclic carbon compound [i.e. , O, S, N, Se, Te, as only ring hetero atom]
- Y10T 436/141111 . . Diverse hetero atoms in same or different rings [e.g., alkaloids, opiates, etc.]
- Y10T 436/142222 . . Hetero-O [e.g., ascorbic acid, etc.]
- Y10T 436/143333 . . . Saccharide [e.g., DNA, etc.]
- Y10T 436/144444 Glucose
- Y10T 436/145555 . . Hetero-N
- Y10T 436/146666 . . . Bile pigment
- Y10T 436/147777 . . . Plural nitrogen in the same ring [e.g., barbituates, creatinine, etc.]
- Y10T 436/148888 Uric acid
- Y10T 436/15 . Inorganic acid or base [e.g. , hcl, sulfuric acid, etc.]
- Y10T 436/153333 . . Halogen containing
- Y10T 436/156666 . . Sulfur containing
- Y10T 436/16 . Phosphorus containing
- Y10T 436/163333 . . Organic [e.g., chemical warfare agents, insecticides, etc.]
- Y10T 436/166666 . . of inorganic phosphorus compound in body fluid
- Y10T 436/17 . Nitrogen containing
- Y10T 436/170769 . . N-Nitroso containing [e.g., nitrosamine, etc.]
- Y10T 436/171538 . . Urea or blood urea nitrogen
- Y10T 436/172307 . . Cyanide or isocyanide
- Y10T 436/173076 . . Nitrite or nitrate
- Y10T 436/173845 . . Amine and quaternary ammonium
- Y10T 436/174614 . . . Tertiary amine
- Y10T 436/175383 . . . Ammonia
- Y10T 436/176152 . . Total nitrogen determined
- Y10T 436/176921 . . . As part of an elemental analysis
- Y10T 436/177692 . . Oxides of nitrogen
- Y10T 436/178459 . . . Only nitrogen dioxide
- Y10T 436/179228 . . . Both nitrogen oxide and dioxide
- Y10T 436/18 . Sulfur containing

- Y10T 436/182 . . Organic or sulfhydryl containing [e.g., mercaptan, hydrogen, sulfide, etc.]
- Y10T 436/184 . . . Only hydrogen sulfide
- Y10T 436/186 . . Sulfur dioxide
- Y10T 436/188 . . Total or elemental sulfur
- Y10T 436/19 . Halogen containing
- Y10T 436/193333 . . In aqueous solution
- Y10T 436/196666 . . Carbon containing compound [e.g., vinylchloride, etc.]
- Y10T 436/20 . Oxygen containing
- Y10T 436/200833 . . Carbonyl, ether, aldehyde or ketone containing
- Y10T 436/201666 . . . Carboxylic acid
- Y10T 436/202499 . . . Formaldehyde or acetone
- Y10T 436/203332 . . Hydroxyl containing
- Y10T 436/204165 . . . Ethanol
- Y10T 436/204998 . . Inorganic carbon compounds
- Y10T 436/205831 . . . Carbon monoxide only
- Y10T 436/206664 . . Ozone or peroxide
- Y10T 436/207497 . . Molecular oxygen
- Y10T 436/208339 . . . Fuel/air mixture or exhaust gas analysis
- Y10T 436/209163 . . . Dissolved or trace oxygen or oxygen content of a sealed environment
- Y10T 436/21 . Hydrocarbon
- Y10T 436/212 . . Aromatic
- Y10T 436/214 . . Acyclic [e.g., methane, octane, isoparaffin, etc.]
- Y10T 436/216 . . . Unsaturated [e.g., ethylene, diene, etc.]
- Y10T 436/218 . . Total hydrocarbon, flammability, combustibility [e.g., air-fuel mixture, etc.]
- Y10T 436/22 . Hydrogen, per se
- Y10T 436/23 . Carbon containing
- Y10T 436/235 . . In an aqueous solution [e.g., TOC, etc.]
- Y10T 436/24 . Nuclear magnetic resonance, electron spin resonance or other spin effects or mass spectrometry
- Y10T 436/25 . including sample preparation
- Y10T 436/25125 . . Digestion or removing interfering materials
- Y10T 436/2525 . . Stabilizing or preserving
- Y10T 436/25375 . . Liberation or purification of sample or separation of material from a sample [e.g., filtering, centrifuging, etc.]
- Y10T 436/255 . . . including use of a solid sorbent, semipermeable membrane, or liquid extraction
- Y10T 436/25625 . . Dilution
- Y10T 436/2575 . . Volumetric liquid transfer
- Y10T 436/25875 . . Gaseous sample or with change of physical state

Former US Class 442 series**Y10T 442/00****Fabric [woven, knitted, or nonwoven textile or cloth, etc.]**

- Y10T 442/10 . Scrim [e.g., open net or mesh, gauze, loose or open weave or knit, etc.]
- Y10T 442/102 . . Woven scrim
- Y10T 442/103 . . . Including a multifilament fiber precoated with other than free metal or alloy prior to weaving
- Y10T 442/105 . . . Comprising a composite fiber
- Y10T 442/107 . . . Comprising at least two chemically different fibers
- Y10T 442/109 . . . Metal or metal-coated fiber-containing scrim
- Y10T 442/11 Including an additional free metal or alloy constituent
- Y10T 442/112 Particulate free metal or alloy constituent
- Y10T 442/114 Including a foam layer
- Y10T 442/116 Including a woven fabric which is not a scrim
- Y10T 442/117 Including a nonwoven fabric which is not a scrim
- Y10T 442/119 Including a paper layer
- Y10T 442/121 Including a nonwoven fabric which is not a scrim
- Y10T 442/122 Two or more nonwoven fabric layers
- Y10T 442/124 Including a natural or synthetic rubber layer
- Y10T 442/126 Including a preformed film, foil, or sheet
- Y10T 442/128 Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
- Y10T 442/129 Including a ceramic or glass layer
- Y10T 442/131 Including a coating or impregnation of synthetic polymeric material
- Y10T 442/133 . . . Inorganic fiber-containing scrim
- Y10T 442/134 Including a carbon or carbonized fiber
- Y10T 442/136 Including a foam layer
- Y10T 442/138 Including a metal layer
- Y10T 442/14 Including an additional scrim layer
- Y10T 442/141 Including a woven fabric which is not a scrim
- Y10T 442/143 Including a nonwoven fabric which is not a scrim
- Y10T 442/145 Including a preformed film, foil, or sheet
- Y10T 442/147 Including a mica layer
- Y10T 442/148 Including a coating or impregnation containing particulate material other than fiber
- Y10T 442/15 . . . Including a foam layer
- Y10T 442/152 . . . Including a free metal or alloy constituent
- Y10T 442/153 . . . Including an additional scrim layer
- Y10T 442/155 . . . Including a paper layer
- Y10T 442/157 Two or more paper layers

- Y10T 442/159 . . . Including a nonwoven fabric which is not a scrim
- Y10T 442/16 Two or more nonwoven layers
- Y10T 442/162 . . . Including a natural or synthetic rubber layer
- Y10T 442/164 . . . Including a preformed film, foil, or sheet
- Y10T 442/166 Cellulose acetate film or sheet
- Y10T 442/167 Fluorinated polyolefin film or sheet
- Y10T 442/169 Polyolefin film or sheet
- Y10T 442/171 . . . Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
- Y10T 442/172 . . . Coated or impregnated
- Y10T 442/174 Including particulate material other than fiber in coating or impregnation
- Y10T 442/176 Three or more layers
- Y10T 442/178 Synthetic polymeric fiber
- Y10T 442/179 Nylon fiber
- Y10T 442/181 Bitumen coating or impregnation
- Y10T 442/183 . . . Synthetic polymeric fiber
- Y10T 442/184 . . Nonwoven scrim
- Y10T 442/186 . . . Comprising a composite fiber
- Y10T 442/188 . . . Metal or metal-coated fiber-containing scrim
- Y10T 442/19 Including a paper layer
- Y10T 442/191 . . . Inorganic fiber-containing scrim
- Y10T 442/193 Including a foam layer
- Y10T 442/195 . . . Including a foam layer
- Y10T 442/197 . . . Including a nonwoven fabric which is not a scrim
- Y10T 442/198 . . . Coated or impregnated
- Y10T 442/20 . . Coated or impregnated woven, knit, or nonwoven fabric which is not [a] associated with another preformed layer or fiber layer or, [b] with respect to woven and knit, characterized, respectively, by a particular or differential weave or knit, wherein the coating or impregnation is neither a foamed material nor a free metal or alloy layer
- Y10T 442/2008 . . Fabric composed of a fiber or strand which is of specific structural definition
- Y10T 442/2016 . . Impregnation is confined to a plane disposed between both major fabric surfaces which are essentially free of impregnating material
- Y10T 442/2025 . . Coating produced by extrusion
- Y10T 442/2033 . . Coating or impregnation formed in situ [e.g., by interfacial condensation, coagulation, precipitation, etc.]
- Y10T 442/2041 . . Two or more non-extruded coatings or impregnations
- Y10T 442/2049 . . . Each major face of the fabric has at least one coating or impregnation
- Y10T 442/2057 At least two coatings or impregnations of different chemical composition
- Y10T 442/2066 Different coatings or impregnations on opposite faces of the fabric

Y10T 442/2074	. . . . .	At least one coating or impregnation contains particulate material
Y10T 442/2082	. . . . .	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/209	. . . . .	At least one coating or impregnation contains particulate material
Y10T 442/2098	. . . . .	At least two coatings or impregnations of different chemical composition
Y10T 442/2107	. . . . .	At least one coating or impregnation contains particulate material
Y10T 442/2115	. . . . .	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/2123	. . . . .	At least one coating or impregnation contains particulate material
Y10T 442/2131	. . . . .	At least one coating or impregnation functions to fix pigments or particles on the surface of a coating or impregnation
Y10T 442/2139	. . . . .	Coating or impregnation specified as porous or permeable to a specific substance [e.g., water vapor, air, etc.]
Y10T 442/2148	. . . . .	Coating or impregnation is specified as microporous but is not a foam
Y10T 442/2156	. . . . .	Coating or impregnation collects radionuclide or heavy metal
Y10T 442/2164	. . . . .	Coating or impregnation specified as water repellent
Y10T 442/2172	. . . . .	Also specified as oil repellent
Y10T 442/218	. . . . .	Organosilicon containing
Y10T 442/2189	. . . . .	Fluorocarbon containing
Y10T 442/2197	. . . . .	Nitrogen containing
Y10T 442/2205	. . . . .	Natural oil or wax containing
Y10T 442/2213	. . . . .	Coating or impregnation is specified as weather proof, water vapor resistant, or moisture resistant
Y10T 442/2221	. . . . .	Coating or impregnation is specified as water proof
Y10T 442/223	. . . . .	Organosilicon containing
Y10T 442/2238	. . . . .	Fluorocarbon containing
Y10T 442/2246	. . . . .	Nitrogen containing
Y10T 442/2254	. . . . .	Natural oil or wax containing
Y10T 442/2262	. . . . .	Coating or impregnation is oil repellent but not oil or stain release
Y10T 442/227	. . . . .	Fluorocarbon containing
Y10T 442/2279	. . . . .	Coating or impregnation improves soil repellency, soil release, or anti- soil redeposition qualities of fabric
Y10T 442/2287	. . . . .	Fluorocarbon containing
Y10T 442/2295	. . . . .	Linear polyether group chain containing
Y10T 442/2303	. . . . .	Coating or impregnation provides a fragrance or releases an odor intended to be perceptible to humans
Y10T 442/2311	. . . . .	Coating or impregnation is a lubricant or a surface friction reducing agent other than specified as improving the "hand" of the fabric or increasing the softness thereof
Y10T 442/232	. . . . .	Fluorocarbon containing
Y10T 442/2328	. . . . .	Organosilicon containing
Y10T 442/2336	. . . . .	Natural oil or wax containing

- Y10T 442/2344 . . Coating or impregnation is anti-slip or friction-increasing other than specified as an abrasive
- Y10T 442/2352 . . Coating or impregnation functions to soften the feel of or improve the "hand" of the fabric
- Y10T 442/2361 . . Coating or impregnation improves stiffness of the fabric other than specified as a size
- Y10T 442/2369 . . Coating or impregnation improves elasticity, bendability, resiliency, flexibility, or shape retention of the fabric
- Y10T 442/2377 . . . Improves elasticity
- Y10T 442/2385 . . . Improves shrink resistance
- Y10T 442/2393 . . . Coating or impregnation provides crease-resistance or wash and wear characteristics
- Y10T 442/2402 . . Coating or impregnation specified as a size
- Y10T 442/241 . . Coating or impregnation improves snag or pull resistance of the fabric
- Y10T 442/2418 . . Coating or impregnation increases electrical conductivity or anti-static quality
- Y10T 442/2426 . . . Elemental carbon containing
- Y10T 442/2434 . . . Linear polyether group chain containing
- Y10T 442/2443 . . . Nitrogen and phosphorus containing
- Y10T 442/2451 . . . Phosphorus containing
- Y10T 442/2459 . . . Nitrogen containing
- Y10T 442/2467 . . . Sulphur containing
- Y10T 442/2475 . . Coating or impregnation is electrical insulation-providing, -improving, or -increasing, or conductivity-reducing
- Y10T 442/2484 . . Coating or impregnation is water absorbency-increasing or hydrophilicity-increasing or hydrophilicity-imparting
- Y10T 442/2492 . . . Polyether group containing
- Y10T 442/25 . . Coating or impregnation absorbs sound
- Y10T 442/2508 . . Coating or impregnation absorbs chemical material other than water
- Y10T 442/2516 . . . Chemical material is one used in biological or chemical warfare
- Y10T 442/2525 . . Coating or impregnation functions biologically [e.g., insect repellent, antiseptic, insecticide, bactericide, etc.]
- Y10T 442/2533 . . . Inhibits mildew
- Y10T 442/2541 . . . Insect repellent
- Y10T 442/2549 . . Coating or impregnation is chemically inert or of stated nonreactance
- Y10T 442/2557 . . . Oxygen or ozone resistant
- Y10T 442/2566 . . . Organic solvent resistant [e.g., dry cleaning fluid, etc.]
- Y10T 442/2574 . . . Acid or alkali resistant
- Y10T 442/2582 . . Coating or impregnation contains an optical bleach or brightener or functions as an optical bleach or brightener [e.g., it masks fabric yellowing, etc.]
- Y10T 442/259 . . Coating or impregnation provides protection from radiation [e.g., U.V., visible light, I.R., micscheme-change-itemave, high energy particle, etc.] or heat retention thru radiation absorption
- Y10T 442/2598 . . . Radiation reflective

Y10T 442/2607	. . . Radiation absorptive
Y10T 442/2615	. . Coating or impregnation is resistant to penetration by solid implements
Y10T 442/2623	. . . Ballistic resistant
Y10T 442/2631	. . Coating or impregnation provides heat or fire protection
Y10T 442/2639	. . . Coated or impregnated asbestos fabric
Y10T 442/2648	. . . Coating or impregnation is specified as an intumescent material
Y10T 442/2656	. . . Antimony containing
Y10T 442/2664	. . . Boron containing
Y10T 442/2672	. . . Phosphorus containing
Y10T 442/268	. . . . Phosphorus and nitrogen containing compound
Y10T 442/2689	. . . . A phosphorus containing compound and a nitrogen containing compound
Y10T 442/2697	. . . . Phosphorus and halogen containing compound
Y10T 442/2705	. . . . A phosphorus containing compound and a halogen containing compound
Y10T 442/2713	. . . Halogen containing
Y10T 442/2721	. . . Nitrogen containing
Y10T 442/273	. . Coating or impregnation provides wear or abrasion resistance
Y10T 442/2738	. . Coating or impregnation intended to function as an adhesive to solid surfaces subsequently associated therewith
Y10T 442/2746	. . . Heat-activatable adhesive
Y10T 442/2754	. . . Pressure-sensitive adhesive
Y10T 442/2762	. . Coated or impregnated natural fiber fabric [e.g., cotton, wool, silk, linen, etc.]
Y10T 442/277	. . . Coated or impregnated cellulosic fiber fabric
Y10T 442/2779	. . . . Coating or impregnation contains an acrylic polymer or copolymer [e.g., polyacrylonitrile, polyacrylic acid, etc.]
Y10T 442/2787	. . . . Coating or impregnation contains a vinyl polymer or copolymer
Y10T 442/2795	. . . . Coating or impregnation contains an epoxy polymer or copolymer or polyether
Y10T 442/2803	. . . . Polymeric coating or impregnation from a silane or siloxane not specified as lubricant or water repellent
Y10T 442/2811	. . . . Coating or impregnation contains polyimide or polyamide
Y10T 442/282	. . . . Coating or impregnation contains natural gum, rosin, natural oil, or wax
Y10T 442/2828	. . . . Coating or impregnation contains aldehyde or ketone condensation product
Y10T 442/2836	. . . . . Phenol-aldehyde condensate
Y10T 442/2844	. . . . . Melamine-aldehyde condensate
Y10T 442/2852	. . . . . Amide-aldehyde condensate [e.g., modified urea-aldehyde condensate, etc.]
Y10T 442/2861	. . Coated or impregnated synthetic organic fiber fabric
Y10T 442/2869	. . . Coated or impregnated regenerated cellulose fiber fabric

Y10T 442/2877	. . .	Coated or impregnated polyvinyl alcohol fiber fabric
Y10T 442/2885	. . .	Coated or impregnated acrylic fiber fabric
Y10T 442/2893	. . .	Coated or impregnated polyamide fiber fabric
Y10T 442/2902	. . . .	Aromatic polyamide fiber fabric
Y10T 442/291	. . .	Coated or impregnated polyolefin fiber fabric
Y10T 442/2918	. . . .	Polypropylene fiber fabric
Y10T 442/2926	. .	Coated or impregnated inorganic fiber fabric
Y10T 442/2934	. . .	Coating or impregnation contains vinyl polymer or copolymer
Y10T 442/2943	. . . .	Vinyl acetate polymer or copolymer
Y10T 442/2951	. . .	Coating or impregnation contains epoxy polymer or copolymer or polyether
Y10T 442/2959	. . .	Coating or impregnation contains aldehyde or ketone condensation product
Y10T 442/2967	. . . .	Amide-aldehyde condensate
Y10T 442/2975	. . .	Coated or impregnated ceramic fiber fabric
Y10T 442/2984	. . .	Coated or impregnated carbon or carbonaceous fiber fabric
Y10T 442/2992	. . .	Coated or impregnated glass fiber fabric
Y10T 442/30	. .	Woven fabric [i.e., woven strand or strip material]
Y10T 442/3008	. .	Woven fabric has an elastic quality
Y10T 442/3016	. . .	Including a preformed layer other than the elastic woven fabric [e.g., fabric or film or foil or sheet layer, etc.]
Y10T 442/3024	. . .	Including elastic strand or strip
Y10T 442/3033	. .	Including a strip or ribbon
Y10T 442/3041	. . .	Woven fabric comprises strips or ribbons only
Y10T 442/3049	. .	Including strand precoated with other than free metal or alloy
Y10T 442/3057	. . .	Multiple coatings
Y10T 442/3065	. .	Including strand which is of specific structural definition
Y10T 442/3073	. . .	Strand material is core-spun [not sheath-core bicomponent strand]
Y10T 442/3081	. . . .	Core is synthetic polymeric material
Y10T 442/3089	. . .	Cross-sectional configuration of strand material is specified
Y10T 442/3098	. . . .	Cross-sectional configuration varies longitudinally along the strand
Y10T 442/3106	. . . .	Hollow strand material
Y10T 442/3114	. . . .	Cross-sectional configuration of the strand material is other than circular
Y10T 442/3122	. . . . .	Cross-sectional configuration is multi-lobal
Y10T 442/313	. . .	Strand material formed of individual filaments having different chemical compositions
Y10T 442/3138	. . . .	Including inorganic filament
Y10T 442/3146	. .	Strand material is composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material

Y10T 442/3154	. . .	Sheath-core multicomponent strand material
Y10T 442/3163	. . .	Islands-in-sea multicomponent strand material
Y10T 442/3171	. . .	Strand material is a blend of polymeric material and a filler material
Y10T 442/3179	. .	Woven fabric is characterized by a particular or differential weave other than fabric in which the strand denier or warp/weft pick count is specified
Y10T 442/3187	. . .	Triaxially woven fabric
Y10T 442/3195	. . .	Three-dimensional weave [e.g., x-y-z planes, multi-planar warps and/or wefts, etc.]
Y10T 442/3203	. . . .	Multi-planar warp layers
Y10T 442/3211	. . . .	Multi-planar weft layers
Y10T 442/322	. . .	Warp differs from weft
Y10T 442/3228	. . . .	Materials differ
Y10T 442/3236	. . . . .	Including inorganic strand material
Y10T 442/3244	. . . . .	Including natural strand material [e.g., cotton, wool, etc.]
Y10T 442/3252	. . . . .	Including synthetic polymeric strand material
Y10T 442/326	. . . . .	Including synthetic polymeric strand material
Y10T 442/3268	. . . . .	Including natural strand material
Y10T 442/3276	. . . . .	Including polyamide strand material
Y10T 442/3285	. . . . .	Including polyester strand material
Y10T 442/3293	. . .	Warp and weft are identical and contain at least two chemically different strand materials
Y10T 442/3301	. . .	Coated, impregnated, or autogenous bonded
Y10T 442/3309	. . . .	Woven fabric contains inorganic strand material
Y10T 442/3317	. . . .	Woven fabric contains synthetic polymeric strand material
Y10T 442/3325	. .	Including a foamed layer or component
Y10T 442/3333	. . .	Including a free metal or alloy constituent
Y10T 442/3341	. . .	Plural foam layers
Y10T 442/335	. . .	Plural fabric layers
Y10T 442/3358	. . . .	Including a nonwoven fabric layer
Y10T 442/3366	. . .	Woven fabric is coated, impregnated, or autogenously bonded
Y10T 442/3374	. . . .	Coating or impregnation includes particulate material other than fiber
Y10T 442/3382	. .	Including a free metal or alloy constituent
Y10T 442/339	. . .	Metal or metal-coated strand
Y10T 442/3398	. . .	Vapor or sputter deposited metal layer
Y10T 442/3407	. . .	Chemically deposited metal layer [e.g., chemical precipitation or electrochemical deposition or plating, etc.]
Y10T 442/3415	. . .	Preformed metallic film or foil or sheet [film or foil or sheet had structural integrity prior to association with the woven fabric]
Y10T 442/3423	. . . .	Plural metallic films or foils or sheets
Y10T 442/3431	. . . .	Plural fabric layers
Y10T 442/3439	. . . . .	Including a nonwoven fabric layer

Y10T 442/3447	. . . .	Including a preformed synthetic polymeric film or sheet [i.e., film or sheet having structural integrity prior to association with the woven fabric]
Y10T 442/3455	. . . .	Including particulate material other than fiber
Y10T 442/3463	. . . .	Plural fabric layers
Y10T 442/3472	. . . .	Woven fabric including an additional woven fabric layer
Y10T 442/348	. . . .	Mechanically needled or hydroentangled
Y10T 442/3488	. . . .	Four or more layers
Y10T 442/3496	. . . .	Coated, impregnated, or autogenously bonded
Y10T 442/3504	. . . .	Woven fabric layers comprise chemically different strand material
Y10T 442/3512	. . . .	Three or more fabric layers
Y10T 442/352	. . . . .	One of which is a nonwoven fabric layer
Y10T 442/3528	. . . .	Three or more fabric layers
Y10T 442/3537	. . . . .	One of which is a nonwoven fabric layer
Y10T 442/3545	. . . .	Woven fabric layers impregnated with a blend of thermosetting and thermoplastic resins
Y10T 442/3553	. . . .	Woven fabric layers impregnated with an organosilicon resin
Y10T 442/3561	. . . .	Woven fabric layers impregnated with a natural or synthetic rubber
Y10T 442/3569	. . . .	Woven fabric layers impregnated with a thermosetting resin
Y10T 442/3577	. . . . .	Phenolic resin
Y10T 442/3585	. . . . .	Epoxy resin
Y10T 442/3594	. . . .	Woven fabric layers impregnated with a thermoplastic resin [e.g., vinyl polymer, etc.]
Y10T 442/3602	. . . .	Three or more distinct layers
Y10T 442/361	. . . .	At least one layer is derived from water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/3618	. . . .	At least one layer contains wood or cork
Y10T 442/3626	. . . .	At least one layer contains bituminous material [e.g., tar, pitch, asphalt, etc.]
Y10T 442/3634	. . . .	At least one layer comprises paper
Y10T 442/3642	. . . .	At least one layer contains natural or synthetic rubber
Y10T 442/365	. . . .	At least one layer is a preformed synthetic polymeric film or sheet
Y10T 442/3659	. . . .	At least one layer comprises ceramic or glass material in other than particulate form
Y10T 442/3667	. . . .	Composite consisting of at least two woven fabrics bonded by an interposed adhesive layer [but not two woven fabrics bonded together by an impregnation which penetrates through the thickness of at least one of the woven fabric layers]
Y10T 442/3675	. . . . .	Fabric layer contains natural strand material
Y10T 442/3683	. . . . .	Fabric layer contains carbon or carbonaceous strand material
Y10T 442/3691	. . . . .	Fabric layer contains glass strand material
Y10T 442/3699	. . . .	Including particulate material other than fiber
Y10T 442/3707	. . . .	Woven fabric including a nonwoven fabric layer other than paper

Y10T 442/3715	. . .	Nonwoven fabric layer comprises parallel arrays of strand material
Y10T 442/3724	. . .	Needled
Y10T 442/3732	. . . .	Including an additional nonwoven fabric
Y10T 442/374	. . . .	Additional nonwoven fabric comprises chemically different strand material than the first nonwoven fabric
Y10T 442/3748	. . . .	Including inorganic strand material
Y10T 442/3756	. . . .	Nonwoven fabric layer comprises at least two chemically different fibers
Y10T 442/3764	. . . .	Coated, impregnated, or autogenously bonded
Y10T 442/3772	. . .	Hydroentangled
Y10T 442/378	. . .	Coated, impregnated, or autogenously bonded
Y10T 442/3789	. . . .	Plural nonwoven fabric layers
Y10T 442/3797	. . . .	Coating or impregnation is derived from a water-settable material [e.g., cement, gypsum, etc.]
Y10T 442/3805	. . . .	Coating or impregnation contains natural or synthetic rubber
Y10T 442/3813	. . . .	Coating or impregnation contains synthetic polymeric material
Y10T 442/3821	. . . .	Coating or impregnation contains bituminous material
Y10T 442/3829	. . . .	Four or more layers
Y10T 442/3837	. . . .	Including particulate material other than fiber
Y10T 442/3846	. . . .	Including particulate material other than fiber
Y10T 442/3854	. .	Woven fabric with a preformed polymeric film or sheet
Y10T 442/3862	. . .	Ester condensation polymer sheet or film [e.g., polyethylene terephthalate, etc.]
Y10T 442/387	. . .	Vinyl polymer or copolymer sheet or film [e.g., polyvinyl chloride, polyvinylidene chloride, polyvinyl acetate, etc.]
Y10T 442/3878	. . .	Fluorinated olefin polymer or copolymer sheet or film [e.g., Teflon®, etc.]
Y10T 442/3886	. . .	Olefin polymer or copolymer sheet or film [e.g., polypropylene, polyethylene, ethylene-butylene copolymer, etc.]
Y10T 442/3894	. . .	Amide condensation polymer sheet or film [e.g., nylon 6, etc.]
Y10T 442/3902	. . .	Polyimide sheet or film
Y10T 442/3911	. . .	Natural or synthetic rubber sheet or film
Y10T 442/3919	. . .	Including particulate material other than fiber
Y10T 442/3927	. .	Including a paper or wood pulp layer
Y10T 442/3935	. . .	Mica paper layer
Y10T 442/3943	. . .	Plural paper or wood pulp layers
Y10T 442/3951	. . .	Including a bituminous layer
Y10T 442/3959	. . .	Including an outermost adhesive layer
Y10T 442/3967	. . .	Including a natural or synthetic rubber layer
Y10T 442/3976	. .	Including strand which is stated to have specific attributes [e.g., heat or fire resistance, chemical or solvent resistance, high absorption for aqueous composition, water solubility, heat shrinkability, etc.]
Y10T 442/3984	. . .	Strand is other than glass and is heat or fire resistant

- Y10T 442/3992 . . . Strand is heat shrinkable
- Y10T 442/40 . Knit fabric [i.e., knit strand or strip material]
- Y10T 442/406 . . Including parallel strips
- Y10T 442/413 . . Including an elastic strand
- Y10T 442/419 . . Including strand precoated with other than free metal or alloy
- Y10T 442/425 . . Including strand which is of specific structural definition
- Y10T 442/431 . . . Cross-sectional configuration of strand material is specified
- Y10T 442/438 . . . Strand material formed of individual filaments having different chemical compositions
- Y10T 442/444 . . Strand is a monofilament composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material
- Y10T 442/45 . . Knit fabric is characterized by a particular or differential knit pattern other than open knit fabric or a fabric in which the strand denier is specified
- Y10T 442/456 . . . Including additional strand inserted within knit fabric
- Y10T 442/463 Warp knit insert strand
- Y10T 442/469 . . Including a foamed layer or component
- Y10T 442/475 . . Including a free metal or alloy constituent
- Y10T 442/481 . . . Chemically deposited metal layer [e.g., chemical precipitation or electrochemical deposition or plating, etc.]
- Y10T 442/488 . . Including an additional knit fabric layer
- Y10T 442/494 . . Including a nonwoven fabric layer other than paper
- Y10T 442/50 . FELT FABRIC
- Y10T 442/51 . . From natural organic fiber [e.g., wool, etc.]
- Y10T 442/53 . . . Including particulate material other than fiber
- Y10T 442/54 . . . At least three layers
- Y10T 442/56 . . From synthetic organic fiber
- Y10T 442/57 . . Including particulate material other than fiber
- Y10T 442/59 . . At least three layers
- Y10T 442/60 . Nonwoven fabric [i.e., nonwoven strand or fiber material]
- Y10T 442/601 . . Nonwoven fabric has an elastic quality
- Y10T 442/602 . . . Nonwoven fabric comprises an elastic strand or fiber material
- Y10T 442/603 . . Including strand or fiber material precoated with other than free metal or alloy
- Y10T 442/604 . . . Strand or fiber material is glass
- Y10T 442/605 . . . Strand or fiber material is inorganic
- Y10T 442/607 . . . Strand or fiber material is synthetic polymer
- Y10T 442/608 . . Including strand or fiber material which is of specific structural definition
- Y10T 442/609 . . . Cross-sectional configuration of strand or fiber material is specified

Y10T 442/61	. . . .	Cross-sectional configuration varies longitudinally along strand or fiber material
Y10T 442/611	. . . .	Cross-sectional configuration of strand or fiber material is other than circular
Y10T 442/612	. . . .	Hollow strand or fiber material
Y10T 442/613	. . . .	Microcellular strand or fiber material
Y10T 442/614	. . . .	Strand or fiber material specified as having micro dimensions [i.e., microfiber]
Y10T 442/615	. . . .	Strand or fiber material is blended with another chemically different microfiber in the same layer
Y10T 442/616	. . . . .	Blend of synthetic polymeric and inorganic microfibers
Y10T 442/618	. . . . .	Blend of chemically different inorganic microfibers
Y10T 442/619	. . . .	Including other strand or fiber material in the same layer not specified as having micro dimensions
Y10T 442/62	. . . .	Including another chemically different microfiber in a separate layer
Y10T 442/621	. . . .	Including other strand or fiber material in a different layer not specified as having micro dimensions
Y10T 442/622	. . . .	Microfiber is a composite fiber
Y10T 442/623	. . . .	Microfiber is glass
Y10T 442/624	. . . .	Microfiber is carbon or carbonaceous
Y10T 442/625	. . . .	Autogenously bonded
Y10T 442/626	. . . .	Microfiber is synthetic polymer
Y10T 442/627	. . . .	Strand or fiber material is specified as non-linear [e.g., crimped, coiled, etc.]
Y10T 442/629	. . . .	Composite strand or fiber material
Y10T 442/63	. . . .	Carbon or carbonaceous strand or fiber material
Y10T 442/631	. . . .	Glass strand or fiber material
Y10T 442/632	. . . .	A single nonwoven layer comprising non-linear synthetic polymeric strand or fiber material and strand or fiber material not specified as non-linear
Y10T 442/633	. . . . .	Synthetic polymeric strand or fiber material is of staple length
Y10T 442/634	. . . .	A nonwoven fabric having a layer comprising non-linear synthetic polymeric strand or fiber material and a separate and distinct layer comprising strand or fiber material which is not specified as non-linear
Y10T 442/635	. . . .	Synthetic polymeric strand or fiber material
Y10T 442/636	. . . . .	Synthetic polymeric strand or fiber material is of staple length
Y10T 442/637	. . . .	Including strand or fiber material which is a monofilament composed of two or more polymeric materials in physically distinct relationship [e.g., sheath-core, side-by-side, islands-in-sea, fibrils-in-matrix, etc.] or composed of physical blend of chemically different polymeric materials or a physical blend of a polymeric material and a filler material
Y10T 442/638	. . . .	Side-by-side multicomponent strand or fiber material
Y10T 442/64	. . . .	Islands-in-sea multicomponent strand or fiber material
Y10T 442/641	. . . .	Sheath-core multicomponent strand or fiber material

- Y10T 442/642 . . . Strand or fiber material is a blend of polymeric material and a filler material
- Y10T 442/643 . . Including parallel strand or fiber material within the nonwoven fabric
- Y10T 442/644 . . . Parallel strand or fiber material is glass
- Y10T 442/645 . . . Parallel strand or fiber material is inorganic [e.g., rock wool, mineral wool, etc.]
- Y10T 442/646 . . . Parallel strand or fiber material is naturally occurring [e.g., cotton, wool, etc.]
- Y10T 442/647 . . Including a foamed layer or component
- Y10T 442/648 . . . Including a free metal or alloy constituent
- Y10T 442/649 . . . Plural foamed layers
- Y10T 442/651 . . . Plural fabric layers
- Y10T 442/652 . . . Nonwoven fabric is coated, impregnated, or autogenously bonded
- Y10T 442/653 Including particulate material other than fiber
- Y10T 442/654 . . Including a free metal or alloy constituent
- Y10T 442/655 . . . Metal or metal-coated strand or fiber material
- Y10T 442/656 . . . Preformed metallic film or foil or sheet [film or foil or sheet had structural integrity prior to association with the nonwoven fabric]
- Y10T 442/657 . . . Vapor, chemical, or spray deposited metal layer
- Y10T 442/658 . . . Particulate free metal or alloy constituent
- Y10T 442/659 . . Including an additional nonwoven fabric
- Y10T 442/66 . . . Additional nonwoven fabric is a spun-bonded fabric
- Y10T 442/662 Needled
- Y10T 442/663 Hydroentangled
- Y10T 442/664 . . . Including a wood fiber containing layer
- Y10T 442/665 . . . Including a layer derived from a water-settable material [e.g., cement, gypsum, etc.]
- Y10T 442/666 . . . Mechanically interengaged by needling or impingement of fluid [e.g., gas or liquid stream, etc.]
- Y10T 442/667 Needled
- Y10T 442/668 . . . Separate nonwoven fabric layers comprise chemically different strand or fiber material
- Y10T 442/669 At least one layer of inorganic strand or fiber material and at least one layer of synthetic polymeric strand or fiber material
- Y10T 442/67 . . . Multiple nonwoven fabric layers composed of the same inorganic strand or fiber material
- Y10T 442/671 . . . Multiple nonwoven fabric layers composed of the same polymeric strand or fiber material
- Y10T 442/673 . . . Including particulate material other than fiber
- Y10T 442/674 . . Nonwoven fabric with a preformed polymeric film or sheet
- Y10T 442/675 . . . Ester condensation polymer sheet or film [e.g., polyethylene terephthalate, etc.]

- Y10T 442/676 . . . Vinyl polymer or copolymer sheet or film [e.g., polyvinyl chloride, polyvinylidene chloride, polyvinyl acetate, etc.]
- Y10T 442/677 . . . Fluorinated olefin polymer or copolymer sheet or film [e.g., TeflonR, etc.]
- Y10T 442/678 . . . Olefin polymer or copolymer sheet or film [e.g., polypropylene, polyethylene, ethylene-butylene copolymer, etc.]
- Y10T 442/679 . . . Natural or synthetic rubber sheet or film
- Y10T 442/68 . . Melt-blown nonwoven fabric
- Y10T 442/681 . . Spun-bonded nonwoven fabric
- Y10T 442/682 . . Needled nonwoven fabric
- Y10T 442/684 . . . Containing at least two chemically different strand or fiber materials
- Y10T 442/685 Containing inorganic and polymeric strand or fiber materials
- Y10T 442/686 Containing polymeric and natural strand or fiber materials
- Y10T 442/687 Containing inorganic strand or fiber material
- Y10T 442/688 Containing polymeric strand or fiber material
- Y10T 442/689 . . Hydroentangled nonwoven fabric
- Y10T 442/69 . . Autogenously bonded nonwoven fabric
- Y10T 442/691 . . . Inorganic strand or fiber material only
- Y10T 442/692 . . . Containing at least two chemically different strand or fiber materials
- Y10T 442/693 . . Including a paper layer
- Y10T 442/695 . . Including a wood containing layer
- Y10T 442/696 . . Including strand or fiber material which is stated to have specific attributes [e.g., heat or fire resistance, chemical or solvent resistance, high absorption for aqueous compositions, water solubility, heat shrinkability, etc.]
- Y10T 442/697 . . Containing at least two chemically different strand or fiber materials
- Y10T 442/698 . . . Containing polymeric and natural strand or fiber materials
- Y10T 442/699 . . Including particulate material other than strand or fiber material

Former US Class 464 Series

- Y10T 464/00 Rotary shafts, gudgeons, housings, and flexible couplings for rotary shafts**
- Y10T 464/10 . having heating or cooling means
- Y10T 464/20 . with auxilliary indicator or alarm
- Y10T 464/30 . Electrical or magnetic coupling
- Y10T 464/40 . Coupling accommodates drive between members having misaligned or angularly related axes, transmits torque via radially directed pin, and has particular balancing means
- Y10T 464/50 . Shafting having particular vibration dampening or balancing structure

Former US Class 477 Series

- Y10T 477/00 Interrelated power delivery controls, including engine control**
- Y10T 477/10 . Steering by driving

Y10T 477/20	. Plural engines
Y10T 477/23	. . Electric engine
Y10T 477/24	. . . with brake control
Y10T 477/26	. . . with clutch control
Y10T 477/27	. . with clutch control
Y10T 477/30	. Electric engine
Y10T 477/32	. . with clutch control
Y10T 477/322	. . . with brake control
Y10T 477/3225	. . . . Stopped at end of cycle
Y10T 477/323	. . . Engine stopped at end of cycle
Y10T 477/325	. . . Common controller
Y10T 477/327	. . . Electric clutch
Y10T 477/328	. . . Speed responsive
Y10T 477/33	. . with transmission control
Y10T 477/333	. . . Load motion limit control
Y10T 477/337	. . . Transmission change by moving engine
Y10T 477/34	. . . Reversible engine
Y10T 477/343	. . . Engine starting interlock
Y10T 477/347	. . . Condition responsive engine control
Y10T 477/35	. . Brake engaged when engine energy deactivated, brake disengaged when engine energy activated
Y10T 477/357	. . . Cam actuated brake
Y10T 477/363	. . . Electrically actuated brake
Y10T 477/37	. . Brake actuation opens switch to engine
Y10T 477/373	. . . Electrically actuated brake
Y10T 477/377	. . . Fluid actuated brake
Y10T 477/38	. . Control means selectively operates engine energy input and brake
Y10T 477/387	. . . Fluid actuated brake
Y10T 477/393	. . . Electrically actuated brake
Y10T 477/40	. Gas turbine engine
Y10T 477/45	. . Continuously variable transmission
Y10T 477/50	. with supercharger
Y10T 477/55	. . Manifold pressure control
Y10T 477/60	. Transmission control
Y10T 477/606	. . Differential transmission
Y10T 477/613	. . Plural outputs
Y10T 477/619	. . Continuously variable friction transmission
Y10T 477/6197	. . . with fluid drive
Y10T 477/6203	. . . with clutch control
Y10T 477/621	. . . with brake control

Y10T 477/6217	. . .	Interrelated control of diverse transmissions
Y10T 477/6223	. . .	Constant speed output
Y10T 477/623	. . .	Controlled by engine map
Y10T 477/6237	. . .	Belt-type
Y10T 477/624	. . . .	Fluid pressure control
Y10T 477/6242	. . . . .	Ratio change controlled
Y10T 477/62423	. . . . .	Engine coast braking
Y10T 477/62427	. . . . .	with electric valve control
Y10T 477/62429	. . . . .	Duty ratio control
Y10T 477/6243	. . .	Fluid pressure control
Y10T 477/625	. .	Fluid resistance inhibits rotation of planetary transmission element
Y10T 477/631	. .	including fluid drive
Y10T 477/633	. . .	Impeller-turbine-type
Y10T 477/6333	. . . .	Engine controlled
Y10T 477/6337	. . . .	with countershaft gearing
Y10T 477/63378	. . . . .	and turbine shaft brake
Y10T 477/63385	. . . . .	and clutch control
Y10T 477/63393	. . . . .	Control of or by fluid drive
Y10T 477/634	. . . .	with hydrodynamic braking
Y10T 477/6343	. . . .	with nonratio brake
Y10T 477/6347	. . . .	Control responsive to fluid drive
Y10T 477/635	. . . .	with clutch control
Y10T 477/6351	. . . . .	Disengaged during shift
Y10T 477/6352	. . . . .	Speed responsive
Y10T 477/63525	. . . . .	Electrical
Y10T 477/6353	. . . .	with fluid unit vane control
Y10T 477/6357	. . . .	Fill and empty-type fluid units
Y10T 477/636	. . .	Ratio control
Y10T 477/637	. . . .	with planetary transmission control
Y10T 477/638	. .	with clutch control
Y10T 477/6388	. . .	and brake control
Y10T 477/6389	. . . .	Temperature responsive control
Y10T 477/639	. . . .	Engine controlled
Y10T 477/6392	. . . .	Clutch controlled
Y10T 477/6394	. . . .	Gearing controlled
Y10T 477/6395	. . .	Temperature responsive control
Y10T 477/6403	. . .	Clutch, engine, and transmission controlled
Y10T 477/6407	. . . .	Electronic digital control
Y10T 477/641	. . .	Clutch and transmission controlled
Y10T 477/6414	. . . .	Speed responsive control

Y10T 477/6415	. . . . .	with manual override
Y10T 477/6417	. . . . .	Vacuum actuated clutch
Y10T 477/6418	. . . . .	Clutch and engine controlled
Y10T 477/6422	. . . . .	Speed responsive control
Y10T 477/6424	. . . . .	Plural speed signals
Y10T 477/6425	. . . . .	Clutch controlled
Y10T 477/6428	. . . . .	Electric clutch
Y10T 477/643	. . . . .	Vacuum actuated clutch
Y10T 477/6432	. . . . .	Electric control
Y10T 477/6433	. . . . .	Engine controlled
Y10T 477/6437	. . . . .	Speed responsive
Y10T 477/644	. . . . .	with brake control
Y10T 477/646	. . . . .	Anti-creep
Y10T 477/647	. . . . .	Brake controls transmission
Y10T 477/648	. . . . .	Pressure controlled
Y10T 477/649	. . . . .	One control blocks another
Y10T 477/65	. . . . .	Control by sensed ambient condition, pattern indicia, external signal, or temperature
Y10T 477/653	. . . . .	Temperature control
Y10T 477/656	. . . . .	Engine starting interlock
Y10T 477/663	. . . . .	Exhaust emission control
Y10T 477/669	. . . . .	Engine ignition control for transmission change
Y10T 477/67	. . . . .	Ignition advanced or retarded
Y10T 477/671	. . . . .	Ignition intermitting and safety means limiting duration of intermission
Y10T 477/673	. . . . .	Ignition intermitting controlled by manifold pressure
Y10T 477/674	. . . . .	Ignition intermitting initiated by positioning accelerator
Y10T 477/6745	. . . . .	Initiation inhibited by sensed condition
Y10T 477/675	. . . . .	Engine controlled by transmission
Y10T 477/676	. . . . .	Constant output shaft speed
Y10T 477/677	. . . . .	Diminution during transmission change
Y10T 477/679	. . . . .	Responsive to transmission output condition
Y10T 477/68	. . . . .	Transmission setting contingent
Y10T 477/6805	. . . . .	Change to neutral idles engine
Y10T 477/6808	. . . . .	Engine input variable in neutral
Y10T 477/681	. . . . .	Anticreep
Y10T 477/688	. . . . .	Transmission controlled by engine
Y10T 477/689	. . . . .	Shift from neutral shock control
Y10T 477/6895	. . . . .	Pressure controlled
Y10T 477/69	. . . . .	Engine [coast] braking
Y10T 477/691	. . . . .	Electric valve control

Y10T 477/692	. . .	by acceleration
Y10T 477/693	. . .	by input manifold pressure or engine fuel control
Y10T 477/6931	. . . .	Selector-type
Y10T 477/6933	. . . .	with positive shift means
Y10T 477/69335	. . . .	with synchronization
Y10T 477/6934	. . . .	Prevents unsafe or unintentional shift
Y10T 477/6935	. . . .	Reverse inhibitor
Y10T 477/6936	. . . .	Shift valve control
Y10T 477/69362	. . . .	Hysteresis
Y10T 477/693625	. . . . .	Electric control
Y10T 477/69363	. . . .	Plural shift valves
Y10T 477/693635	. . . . .	Electric control
Y10T 477/693636	. . . . .	Downshift control
Y10T 477/693637	. . . . .	Kickdown
Y10T 477/693638	. . . . .	Selector valve overrule
Y10T 477/69364	. . . . .	Downshift control
Y10T 477/693643	. . . . .	Kickdown
Y10T 477/693645	. . . . .	Selector valve overrule
Y10T 477/69365	. . . . .	Electric control
Y10T 477/69366	. . . . .	Downshift control
Y10T 477/69367	. . . . .	Downshift control
Y10T 477/693675	. . . . .	Kickdown
Y10T 477/69368	. . . . .	Selector valve overrule
Y10T 477/6937	. . . .	Servo motor timing
Y10T 477/69373	. . . . .	Downshift
Y10T 477/693738	. . . . .	with fluid accumulator
Y10T 477/693742	. . . . .	Electric valve control
Y10T 477/693746	. . . . .	Double acting servo
Y10T 477/693754	. . . . .	Speed responsive control
Y10T 477/693762	. . . . .	Electric valve control
Y10T 477/69377	. . . . .	with fluid accumulator
Y10T 477/69378	. . . . .	Engine parameter controls back pressure
Y10T 477/69379	. . . . .	Electric valve control
Y10T 477/6938	. . . . .	Double acting servo
Y10T 477/69383	. . . . .	Speed responsive control
Y10T 477/69387	. . . . .	Electric valve control
Y10T 477/6939	. . . .	Transmission pressure controlled
Y10T 477/69393	. . . . .	Variable capacity pump
Y10T 477/69395	. . . . .	Line pressure controlled
Y10T 477/693958	. . . . .	Responsive to speed

Y10T 477/693962	. . . . .	Electric valve control
Y10T 477/693964	. . . . .	Duty ratio control
Y10T 477/693965	. . . . .	Transmission setting contingent
Y10T 477/693973	. . . . .	Electric valve control
Y10T 477/69398	. . . . .	Electric valve control
Y10T 477/694	. .	Engine control linkage mounted on manual gearshift lever
Y10T 477/70	. .	Clutch control
Y10T 477/71	. .	with starter
Y10T 477/73	. .	with fluid drive
Y10T 477/735	. . .	Speed responsive control
Y10T 477/74	. .	with brake control
Y10T 477/743	. . .	Clutch controlled
Y10T 477/745	. . . .	and brake controlled
Y10T 477/747	. . .	Engine controlled
Y10T 477/75	. .	Condition responsive control
Y10T 477/753	. . .	Speed responsive
Y10T 477/755	. . . .	Slip rate control
Y10T 477/757	. . .	Overload release
Y10T 477/759	. . . .	Engine shut off
Y10T 477/76	. .	Electric clutch
Y10T 477/78	. .	Regulated clutch engagement
Y10T 477/79	. .	Engine controlled by clutch control
Y10T 477/80	. .	Brake control
Y10T 477/81	. .	Sensed condition responsive control of engine or brake
Y10T 477/813	. . .	Brake
Y10T 477/814	. . . .	and engine
Y10T 477/816	. . . .	Speed or acceleration responsive
Y10T 477/817	. . .	Speed or acceleration responsive
Y10T 477/82	. .	Plural diverse brake means
Y10T 477/83	. .	Engine energy control having adjusting and holding device, with means on brake control to override holding device
Y10T 477/833	. . .	Holding device engaged by electric means
Y10T 477/835	. . . .	Magnetic holding device
Y10T 477/837	. . .	Mechanical holding device engaged by mechanical means
Y10T 477/839	. . . .	Device or means including a threaded shaft, rack or ratchet
Y10T 477/84	. .	Brake control having holding device, with means on engine control to override holding device
Y10T 477/847	. . .	Holding device responsive to motion, speed or acceleration
Y10T 477/85	. . . .	Holding device comprising brake valve operated by solenoid
Y10T 477/853	. . .	Holding device engaged by electric means

Y10T 477/857	. . . . Holding device comprising brake valve operated by solenoid
Y10T 477/86	. . Brake engaged when engine energy deactivated, brake disengaged when engine energy is activated
Y10T 477/865	. . . Internal combustion engine
Y10T 477/868	. . . . Controls brake valve
Y10T 477/869	. . . . . Vacuum actuated brake
Y10T 477/87	. . Brake condition change modifies engine condition
Y10T 477/873	. . . Brake actuation interrupts ignition circuit of fluid engine
Y10T 477/877	. . . Brake actuation decreases or eliminates fluid energy input to engine
Y10T 477/878	. . . . by closing throttle valve
Y10T 477/879	. . . . by preventing increasing operation of engine energy control
Y10T 477/88	. . Decreasing fluid energy input to engine actuates brake
Y10T 477/89	. . Control means selectively operates engine energy input and brake
Y10T 477/893	. . . Foot operated control means
Y10T 477/8936	. . . . Engine and brake control including interconnected elements
Y10T 477/8941	. . . . Pivots and translates
Y10T 477/8944	. . . . . Pivots about intermediate fulcrum
Y10T 477/8947	. . . . Pivots about two fulcrums
Y10T 477/8953	. . . . Pivots about intermediate fulcrum
Y10T 477/8959	. . . . Lever reciprocates on moveable supports at both ends
Y10T 477/8964	. . . . Pivots for sequential operation
Y10T 477/897	. . . Control means including fluid passage

Former US Class 483 Series

Y10T 483/00	Tool changing
Y10T 483/10	. Process
Y10T 483/11	. with safety means
Y10T 483/115	. . Guard
Y10T 483/12	. with means to regulate operation by means of replaceable information supply [e.g. , templet, tape, card, etc.]
Y10T 483/123	. . Replaceable information comprising tool location
Y10T 483/127	. . . including determining optimum tool access path
Y10T 483/13	. with control means energized in response to activator stimulated by condition sensor
Y10T 483/132	. . Responsive to tool identifying information
Y10T 483/134	. . . Identifying information on tool or tool holder
Y10T 483/136	. . Responsive to tool
Y10T 483/138	. . . including means to monitor and control, i.e., adaptive machining
Y10T 483/14	. with signal or indicator
Y10T 483/15	. with means to condition or adjust tool or tool support

Y10T 483/16	• with means to transfer work
Y10T 483/165	• • Plural machine tools, e.g., flexible manufacturing
Y10T 483/17	• including machine tool or component
Y10T 483/1702	• • Rotating work machine tool [e.g., screw machine, lathe, etc.]
Y10T 483/1705	• • • Tool support comprises rotary spindle
Y10T 483/1707	• • • Tool having specific mounting or work treating feature
Y10T 483/171	• • • • Workpiece holder [e.g., chuck or chuck jaw, collet, etc.]
Y10T 483/1712	• • • • Turning tool insert changer
Y10T 483/1714	• • • Tool changer between tool support and matrix
Y10T 483/1717	• • • • Plural matrices
Y10T 483/1719	• • • • Tool support comprises turret
Y10T 483/1721	• • • • • Linearly moveable tool changer
Y10T 483/1724	• • • • Linearly moveable tool changer
Y10T 483/1726	• • • Direct tool exchange between tool support and matrix
Y10T 483/1729	• • Reciprocating tool machine tool [e.g., broaching machine, shaping machine, etc.]
Y10T 483/1731	• • • including matrix
Y10T 483/1733	• • Rotary spindle machine tool [e.g., milling machine, boring, machine, grinding machine, etc.]
Y10T 483/1736	• • • Tool having specific mounting or work treating feature
Y10T 483/1738	• • • • Tool head
Y10T 483/174	• • • • Abrading wheel
Y10T 483/1743	• • • • including means for angularly orienting tool and spindle
Y10T 483/1745	• • • • • Spindle angularly oriented to align with tool
Y10T 483/1748	• • • Tool changer between spindle and matrix
Y10T 483/175	• • • • Plural matrices
Y10T 483/1752	• • • • including tool holder pivotable about axis
Y10T 483/1755	• • • • • Plural tool holders pivotable about common axis
Y10T 483/1757	• • • • • including intermediate tool changer
Y10T 483/176	• • • • • • Intermediate tool changer includes tool holder pivotable about axis
Y10T 483/1762	• • • • • • Tool holders pivotable with respect to each other
Y10T 483/1764	• • • • • • Tool holders pivotable about plural nonparallel axes
Y10T 483/1767	• • • • • • Linearly movable tool holders
Y10T 483/1769	• • • • • • Extensible tool holders
Y10T 483/1771	• • • • • • Translatable axis
Y10T 483/1774	• • • • • Distinct tool changer for each tool
Y10T 483/1776	• • • • • including intermediate tool changer
Y10T 483/1779	• • • • • Linearly movable tool holder
Y10T 483/1781	• • • • • Tool holder pivotable about plural nonparallel axes
Y10T 483/1783	• • • • including linearly translatable tool changer [e.g., shuttle, ram, etc.]

Y10T 483/1786	. . . . . Plural tool holders
Y10T 483/1788	. . . . . Orthogonally translatable
Y10T 483/179	. . . Direct tool exchange between spindle and matrix
Y10T 483/1793	. . . . Spindle comprises tool changer
Y10T 483/1795	. . . . . Matrix indexes selected tool to transfer position
Y10T 483/1798	. . . . . including means to project tool from matrix
Y10T 483/18	. Tool transfer to or from matrix
Y10T 483/1809	. . Matrix including means to latch tool
Y10T 483/1818	. . Matrix including means to project tool for transfer
Y10T 483/1827	. . . Rectilinear
Y10T 483/1836	. . . Pivoting
Y10T 483/1845	. . Plural matrices
Y10T 483/1855	. . . including tool replenishing
Y10T 483/1864	. . including tool pot or adapter
Y10T 483/1873	. . Indexing matrix
Y10T 483/1882	. . . Rotary disc
Y10T 483/1891	. . . Chain or belt
Y10T 483/19	. Miscellaneous